

INVITATION TO BID

STATE OF LOUISIANA

DIVISION OF ADMINISTRATION
OFFICE OF STATE PURCHASING

BIDS WILL BE PUBLICLY OPENED:

NOV 15, 2005 10:00 AM

PURCHASING AGENCY NO. : 107001

VENDOR NO. :
SOLICITATION : 2203309
FILE NO. : M26143DL
OPENING DATE : 11/15/05**SEE NO. 8 BELOW. RETURN BID TO**2203309 11/15/05 10:00 AM
M26143DLOFFICE OF STATE PURCHASING
OFFICE OF STATE PURCHASING
POST OFFICE BOX 94095
BATON ROUGE, LA 70804-9095BUYER : DOROTHEA YOUNG, CPPB
BUYER PHONE : (225) 342-8022
DATE ISSUED : 09/27/05
REQ. AGENCY : 264000 FOLD HERE-->
DCRT-OFFICE OF STATE PARKS
AGENCY REQ. NO. : 72906016
ISIS REQ. NO. : 1279944
VENDOR PHONE :
FISCAL YEAR : 06
CLASS/SUBCLASS : 98863
SCHEDULED BEGIN DATE : 00/00/00
SCHEDULED END DATE : 00/00/00
T-NUMBER :NEW WOOD SHOP & STORAGE BUILDING
RIC LE GRANGE

TO BE COMPLETED BY VENDOR

1. _____ PLEASE REMOVE FROM THIS COMMODITY CODE.
2. _____ DELIVERY WILL BE MADE IN THIS NUMBER OF DAYS AFTER RECEIPT OF ORDER.
3. _____ % CASH DISCOUNT FOR PROMPT PAYMENT IF MADE WITHIN THIRTY (30) DAYS. CASH DISCOUNTS FOR LESS THAN 30 DAYS OR LESS THAN 1% WILL BE ACCEPTED, BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS. ON INDEFINITE QUANTITY TERM CONTRACTS, CASH DISCOUNTS WILL BE ACCEPTED AND TAKEN BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS.
4. _____ BID BOND ATTACHED, _____ CERTIFIED CHECK ATTACHED, _____ OTHER, IF REQUIRED.
5. _____ BID REFERENCE NUMBER. (THIS NUMBER WILL APPEAR ON RESULTING ORDER OR CONTRACT).

INSTRUCTIONS TO BIDDERS

1. READ THE ENTIRE BID, INCLUDING ALL TERMS AND CONDITIONS AND SPECIFICATIONS.
2. ALL BID PRICES MUST BE TYPED OR WRITTEN IN INK. ANY CORRECTIONS, ERASURES OR OTHER FORMS OF ALTERATION TO UNIT PRICES SHOULD BE INITIALED BY THE BIDDER.
3. THIS BID IS TO BE MANUALLY SIGNED IN INK. FOLD HERE-->
4. BID PRICES SHALL INCLUDE DELIVERY OF ALL ITEMS F.O.B. DESTINATION OR AS OTHERWISE PROVIDED. BIDS CONTAINING "PAYMENT IN ADVANCE" OR "C.O.D." REQUIREMENTS MAY BE REJECTED. PAYMENT IS TO BE MADE WITHIN 30 DAYS AFTER RECEIPT OF PROPERLY EXECUTED INVOICE OR DELIVERY, WHICHEVER IS LATER.
5. AMOUNT OF BID BOND REQUIRED: _____ 5% _____.
6. AMOUNT OF PERFORMANCE BOND, IF REQUIRED. _____ OR _____ 100% _____ OF BID.
7. DESIRED DELIVERY: _____ 120 DAYS ARO _____.
8. TO ASSURE CONSIDERATION OF YOUR BID, ALL BIDS AND ADDENDA SHOULD BE RETURNED IN AN ENVELOPE OR PACKAGE CLEARLY MARKED WITH THE BID OPENING DATE AND THE BID NUMBER, OR SUBMITTED IN THE SPECIAL ENVELOPE IF FURNISHED FOR THAT PURPOSE.
9. BIDS SUBMITTED ARE SUBJECT TO PROVISIONS OF THE LAWS OF THE STATE OF LOUISIANA INCLUDING BUT NOT LIMITED TO L.R.S. 39:1551-1736; PURCHASING RULES AND REGULATIONS; EXECUTIVE ORDERS; STANDARD TERMS AND CONDITIONS; SPECIAL CONDITIONS; AND SPECIFICATIONS LISTED IN THIS SOLICITATION.
10. IMPORTANT: BY SIGNING THE BID, THE BIDDER CERTIFIES COMPLIANCE WITH ALL INSTRUCTIONS TO BIDDERS, TERMS, CONDITIONS AND SPECIFICATIONS, AND FURTHER CERTIFIES THAT THIS BID IS MADE WITHOUT COLLUSION OR FRAUD. THIS BID IS TO BE MANUALLY SIGNED IN INK BY A PERSON AUTHORIZED TO BIND THE VENDOR (SEE NO.30). ALL BID INFORMATION SHALL BE MADE WITH INK OR TYPEWRITTEN.

VENDOR PHONE NUMBER:
FAX NUMBER:

TITLE

DATE

SIGNATURE OF AUTHORIZED BIDDER - SEE NO. 30, PAGE 3.
(MUST BE SIGNED)NAME OF BIDDER
(TYPED OR PRINTED)

PROPOSAL NUMBER M 26143 DL

SOLICITATION NUMBER: 2203309

**CONSTRUCT A NEW WOOD SHOP AND STORAGE BUILDING
FOR
CHICOT STATE PARK
VILLE PLATTE, LOUISIANA
CATEGORY**

BID DELIVERY INSTRUCTIONS FOR STATE PURCHASING:

BIDDERS ARE HEREBY ADVISED THAT THE U.S. POSTAL SERVICE DOES NOT MAKE DELIVERIES TO OUR PHYSICAL LOCATION.

BIDS MAY BE MAILED THROUGH THE U.S. POSTAL SERVICE TO OUR BOX AT:

OFFICE OF STATE PURCHASING
P O BOX 94095
BATON ROUGE LA 70804-9095

BIDS MAY BE DELIVERED BY HAND OR COURIER SERVICE TO OUR PHYSICAL LOCATION AS FOLLOWS:

OFFICE OF STATE PURCHASING
CLAIBORNE BUILDING, SUITE 2-160
1201 NORTH THIRD STREET
BATON ROUGE, LA 70802

BIDDER IS SOLELY RESPONSIBLE FOR ENSURING THAT ITS COURIER SERVICE PROVIDER MAKES INSIDE DELIVERIES TO OUR PHYSICAL LOCATION. THE OFFICE OF STATE PURCHASING IS NOT RESPONSIBILITY FOR ANY DELAYS CAUSED BY THE BIDDER'S CHOSEN MEANS OF BID DELIVERY.

BIDDER IS SOLELY RESPONSIBLE FOR THE TIMELY DELIVERY OF ITS BID. FAILURE TO MEET THE BID OPENING DATE & TIME SHALL RESULT IN REJECTION OF THE BID.

PUBLICIZING AWARDS. IN ACCORDANCE WITH L.A.C.34:i.535, UNSUCCESSFUL BIDDERS WILL BE NOTIFIED OF THE AWARD PROVIDED THAT THEY SUBMIT WITH THEIR BID A SELF-ADDRESSED STAMPED ENVELOPE REQUESTING THIS INFORMATION.

FOR ADDITIONAL INFORMATION, CONTACT: **RIC LE GRANGE**
(225) 219-4314

SITE VISIT IS REQUIRED THURSDAY, OCTOBER 27, 2005 @ 10:00 A.M.

Signature Authority.

In accordance with L.R.S. 39:1594 (Act 121), the person signing the bid must be:

1. A current corporate officer, partnership member or other individual specifically authorized to submit a bid as reflected in the appropriate records on file with the Secretary of State; or
2. An individual authorized to bind the vendor as reflected by an accompanying corporate resolution, certificate or affidavit; or
3. An individual listed on the State of Louisiana Bidder's application as authorized to execute bids. By signing the bid, the bidder certifies compliance with the above.

NOTICE TO BIDDERS

Sealed bids will be received for the State of Louisiana by the Division of Administration, Office of State Purchasing, 1201 N. 3rd St., 2nd Floor, Suite 2-160, P O. Box 94095, Baton Rouge, Louisiana 70804-9095 until 10:00 A.M., on November 15, 2005, for the following:

**CONSTRUCT A NEW WOOD SHOP AND STORAGE BUILDING
FOR
CHICOT STATE PARK
VILLE PLATTE, LOUISIANA**

Proposal Number: **M 26143 DL**
Solicitation Number: **2203309**

Complete Bidding Documents may be obtained from:

OFFICE OF STATE PURCHASING
CLAIBORNE BUILDING, 2ND FLOOR
1201 NORTH THIRD STREET
BATON ROUGE, LA 70804
Attn: Pamela Allen
Email: pamela.allen@la.gov
Fax: (225) 342-8688
Phone: (225) 342-8019

SITE VISIT IS REQUIRED THURSDAY, OCTOBER 27, 2005 @ 10:00 A.M.

All bids must be accompanied by bid security equal to five percent (5%) of the sum of the base bid and all alternates, and must be in the form of a certified check, cashier's check or Bid Bond. Surety represents that it is listed on the current U. S. Department of Treasury Financial Management Service list of approved bonding companies and that it is listed thereon as approved for an amount equal to or greater than the amount for which it obligates itself in this instrument. No Bid Bond indicating an obligation of less than five percent (5%) by any method is acceptable.

The successful Bidder shall be required to furnish a Performance and Payment Bond written by a company licensed to do business in Louisiana, in an amount equal to 100% of the Contract amount, and who is currently on the U.S. Department of the Treasury Financial Management Service List. The bond shall not be accepted if written for an amount exceeding the amount listed in the Treasury Financial Management Service List.

Bids shall be accepted only from Contractors who are licensed under La. R.S. 37:2150-2163 for the classification(s) such as, **Building Construction**. No bid may be withdrawn for a period of thirty (30) days after receipt of bids.

When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract Between Owner and Contractor is fully executed.

STATE OF LOUISIANA
DIVISION OF ADMINISTRATION
OFFICE OF STATE PURCHASING
DENISE LEA
DIRECTOR OF STATE PURCHASING

PROPOSAL NUMBER M 26143 DL
DOROTHEA YOUNG (225) 342-8022

GENERAL CONTRACT PROPOSAL FORM

BID OPENING DATE: 10:00 A.M., **NOVEMBER 15, 2005**

STATE OF LOUISIANA
DIVISION OF ADMINISTRATION
PURCHASING SECTION
POST OFFICE BOX 94095, CAPITOL STATION
BATON ROUGE, LOUISIANA 70804-9095

BID MADE BY: _____

PROJECT: Furnish all labor, materials, tools and equipment necessary for Construct
a New Wood Shop and Storage Building at Chicot State Park, Ville Platte,
Louisiana as per plans, drawings and specifications prepared by the
agency.

The undersigned, in compliance with your invitation for bids for the project listed above, having
examined the specifications and related documents, inspected site and being familiar with all of
the conditions surrounding the fulfillment of the contract, hereby proposes to furnish all labor,
materials, tools and equipment necessary to complete the above referenced project within the
time set forth herein and for the price stated below.

The Lump Sum Total Price stated shall include all permits and governmental fees, licenses, and
inspections, and all sales, consumer use and taxes of any other nature or kind whatever arising
from or pertaining to the work or portions thereof provided by the contractor which are legally
enacted at the time bids are received, whether or not yet effective.

BASE BID: I/We propose to furnish all materials and perform all work as described in the
specifications and related documents for the sum of: (WORDS AND
FIGURES)

LUMP SUM TOTAL \$ _____

COMPLETION DATE: The undersigned guarantees completion of project as per base
bid in _____calendar days.

NOTE: WHERE SO INDICATED BY THE MAKEUP OF THE BID FORM, SUMS SHALL BE
EXPRESSED IN BOTH WORDS AND FIGURES, AND IN CASE OF A DISCREPANCY
BETWEEN THE TWO, THE WRITTEN AMOUNT SHALL GOVERN.

IMPORTANT: IN ACCORDANCE WITH R.S. 37:2163A CONTRACTORS' LICENSE NUMBER IN THE APPROPRIATE CLASSIFICATION(S) SUCH AS, **BUILDING CONSTRUCTION**, MUST APPEAR ON THE BID OPENING ENVELOPE ON ALL PROJECTS IN THE AMOUNT OF \$50,000.00 OR MORE (AND \$1.00 OR MORE IF HAZARDOUS MATERIALS ARE INVOLVED).

FOR ANY BID SUBMITTED IN THE AMOUNT OF FIFTY THOUSAND DOLLARS OR MORE, THE CONTRACTOR SHALL CERTIFY THAT HE IS LICENSED AND SHOW HIS LICENSE NUMBER ON THE BID.

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA:

Addendum No: _____ Dated: _____ Addendum No: _____ Dated: _____

Addendum No: _____ Dated: _____ Addendum No: _____ Dated: _____

LOUISIANA CONTRACTORS LICENSE NO. _____

NAME (PLEASE PRINT OR TYPE) _____

SIGNATURE _____

TITLE _____

FIRM NAME _____

ADDRESS _____

PHONE _____ (____) _____

FAX _____ (____) _____

GENERAL CONDITIONS, INSTRUCTIONS, POLICIES AND PROCEDURES

BIDDING PROCEDURE:

All bids must be submitted on the forms provided for this purpose and must be filled out with ink or typewritten and signed in ink. Any interlineation, alteration or erasure must be initialed by the signer of the bid.

Bidder shall assume full responsibility for timely delivery to the location designated for receipt of bids. Any bids received after the designated opening time will be returned unopened.

The Division of Administration of the State of Louisiana is an equal opportunity employer and looks to its Contractors, Subcontractors, vendors and suppliers to take affirmative action to effect this commitment in its operations.

Compliance with civil rights laws. By submitting and signing this solicitation, the bidder agrees to abide by the requirements of the following as applicable: Title VI and Title VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, the Age Act of 1975, and bidder agrees to abide by the requirements of the Americans With Disabilities Act of 1990. Bidder agrees not to discriminate in its employment practices, and will render services under any contract entered into as a result of this solicitation, without regard to race, color, religion, sex, national origin, veteran status, political affiliation, or disabilities. Any act of discrimination committed by bidder, or failure to comply with these statutory obligations when applicable, shall be grounds for termination of any contract entered into as a result of this solicitation.

BIDDERS REPRESENTATION:

In making his bid, each bidder represents that: He has read and understands the bid documents and his bid is made in accordance herewith; he has visited the site and has familiarized himself with the local conditions under which the work is to be performed; and his bid is based upon the specifications described in the bid documents without exception.

ADDENDA:

No Addenda will be issued within a period of seventy-two (72) hours prior to the date set for receipt of bids, except an Addendum, if necessary, postponing the date of receipt of bids or cancelling the request for bids.

Receipt of all Addenda issued shall be acknowledged in bid proposal and/or returned with bid proposal.

COMPLIANCE REGARDING SUSPENSION/DEBARMENT:

CERTIFICATION OF NO SUSPENSION OR DEBARMENT. BY SIGNING AND SUBMITTING ANY BID FOR \$100,000 OR MORE, THE BIDDER CERTIFIES THAT THEIR COMPANY, ANY SUBCONTRACTORS, OR PRINCIPALS ARE NOT SUSPENDED OR DEBARRED BY THE GENERAL SERVICES ADMINISTRATION (GSA) IN ACCORDANCE WITH THE REQUIREMENTS IN OMB CIRCULAR A-133.

A LIST OF PARTIES WHO HAVE BEEN SUSPENDED OR DEBARRED CAN BE VIEWED VIA THE INTERNET AT WWW.ARNET.GOV/EPLS.

CONSIDERATION OF BIDS:

The Division of Administration reserves the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the bid documents or a bid in anyway incomplete or irregular.

The Division of Administration reserves the right to waive any informality or irregularity in any bid received, deemed to be in the best interest of the State of Louisiana.

RECORDATION CERTIFICATE:

Contractor upon receipt of executed contract, bond, purchase order and Notice to Proceed shall record contract and bond with the Clerk of Court in the parish in which the work is to be performed, obtain a Certificate of Recordation from the Clerk of Court and forward this Certificate immediately to the Division of Administration. The contracting agency will process no invoices until receipt of the Certificate of Recordation.

Liquidated Damages in the amount of \$50.00 per day will be assessed for each and every day the project remains incomplete beyond the established completion date.

CONTRACT, PERFORMANCE BOND, LABOR AND MATERIALS PAYMENT BOND:

If the undersigned is notified of the acceptance of the above bid or bids, within thirty (30) days of the time set forth for the opening of bids, he agrees to execute a contract for the work accepted, in the standard contract form currently used by the Division of Administration within ten (10) days after notice from the Division of Administration.

The undersigned further agrees, if awarded the contract, to execute and deliver to the Division of Administration at the time the contract documents are executed, a Performance Bond with Power of Attorney, on the forms provided, in an amount equal to the contract sum and agrees that this bond will be secured by a surety or insurance company currently on the United States Department of the Treasury Financial Management Service List of approved bonding companies and in accordance with restrictions set by them or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds. In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the state of Louisiana. Also, to be provided at the same time is a Labor and Materials Payment Bond in an amount equal to 100% of the contract amount.

BID SECURITY:

Bid security MUST be attached (Insurance Company, Bank Money Order, Certified Check or Cashier's Check) in the sum of five percent (5%) of the amount bid (including base bid and additive alternates, if any) and shall become the property of the Owner in the event the contract and bond are not executed within the time set forth above. If bid bond is used, it shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A-rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent (10%) of policyholders' surplus as shown in the A.M. Best's Key Rating Guide.

AFFIDAVIT:

Successful Contractor shall be required to execute an affidavit attesting "THAT PUBLIC CONTRACT WAS NOT SECURED THROUGH EMPLOYMENT OR PAYMENT OF SOLICITOR".

REJECTION OF BIDS:

The undersigned understands that the Division of Administration reserves the right to reject any and all bids and to waive any informalities.

WITHDRAWAL OF BIDS:

The undersigned agrees that this bid shall be good and may not be withdrawn for a period of thirty (30) calendar days after the bid opening.

PROGRESS PAYMENTS: The following payment schedule shall apply:

For contracts with a completion date of more than thirty (30) days:

On or about the first day of each month, ninety percent (90%) of the value based on the Contract Price of labor and materials incorporated in the work and of materials suitably stored at the site thereof up to the first day of that month, as estimated by the owner, less the aggregate of previous payments and upon substantial completion of the entire work, a sum sufficient to increase the total payment to ninety percent (90%) of the Contract Price.

For contracts with a completion date of thirty (30) days or less:

Upon satisfactory completion of the work, ninety percent (90%) of the Contract Price.

ACCEPTANCE:

Upon written notice by the Owner to the Division of Administration, a Notice by Owner of Acceptance of Work will be executed and forwarded to the Contractor for recording with the Clerk of Court in the parish in which the work has been performed and shall furnish a clear Lien Certificate from the Clerk of Court (to the owner along with final invoice) forty-five (45) days after recordation of acceptance. Final payment of ten percent (10%) will be made at this time.

INSURANCE:

Compensation Insurance, public liability and property damage insurance, as per the attached insurance page, are required on this bid.

Unless otherwise provided, the Owner shall purchase and maintain property insurance upon the entire work at the site to the full insurable value equal to the contract sum plus all amendments.

The State of Louisiana is to provide Builder's Risk Insurance to protect the Owner, Contractor, and Sub-Contractors as their interests may appear. The policy is subject to the following deductibles, which will be paid by the Contractor:

All covered causes of loss, except flood \$1,000 deductible per occurrence
Flood cause of loss \$5,000 deductible per occurrence

The policy insures against "all risk" of direct physical loss or damage subject to certain exclusions and limitations. A copy of the current policy can be found at the Office of Risk Management website at <http://www.doa.louisiana.gov/orm/uw.htm>. It is the Contractor's responsibility to review this policy and, if additional insurance is determined to be needed, to purchase the additional insurance to protect the Contractor and Sub-Contractor interest in the project.

Inquiries concerning the Owner's insurance policy shall be sent to the address shown below. In the event of a loss or claim, please notify the Office of Risk Management at the telephone number shown below, with confirmation in writing, providing all pertinent information, such as date of loss, type of loss, approximate extent of damage, location, and project number.

Division of Administration
Office of Risk Management
Post Office Box 91106
Baton Rouge, LA 70821-9106
(225) 342-8500

INSURANCE REQUIREMENTS

CONTRACTOR'S LIABILITY INSURANCE

Proof of Insurance will be required before work can commence.

Insurance coverage specified below shall be furnished with the following minimum limits:

COMPENSATION INSURANCE: The Contractor and Subcontractors shall take and maintain during the life of the contract Workman's Compensation Insurance for all of their employees employed at the site of the project. In case any class of employees engaged in hazardous work under the Workman's Compensation Statute, the Contractor and Subcontractor shall provide Employer's Liability Insurance for the protection of their employees not otherwise protected.

PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE: Comprehensive Public General Liability Insurance, including but not limited to bodily injury, property damage, contractual liability, products liability, completed operations and owner's protective liability with combined single limits of \$1,000,000 per occurrence with a minimum aggregate of \$2,000,000.

LICENSED AND NON-LICENSED MOTOR VEHICLES: The Contractor shall take out and maintain during the life of the contract, Automobile Public Liability Insurance in an amount not less than combined single limits of \$500,000 per occurrence for bodily injury/property damage. If any non-licensed motor vehicles are engaged in operations within the terms of the contract on the site of the work to perform thereunder, such insurance shall cover the use of all such motor vehicles engaged in operating within the terms of the contract on the site of the work to be performed thereunder, unless such coverage is included in the insurance specified.

JOBSITE VERIFICATION FORM

VENDOR MUST INSPECT JOB SITE TO VERIFY MEASUREMENTS AND/OR AMOUNT OF SUPPLIES NEEDED PRIOR TO BIDDING. IF VENDOR FINDS CONDITIONS THAT DISAGREE WITH THE PHYSICAL LAY-OUT AS DESCRIBED IN THIS BID, OR OTHER FEATURES OF THE SPECIFICATIONS THAT APPEAR TO BE IN ERROR, SAME SHALL BE BROUGHT TO THE ATTENTION OF THE OFFICE OF STATE PURCHASING PERSONNEL PRIOR TO BID OPENING. **SITE VISIT MUST BE VERIFIED BY AGENCY.**

CONTACT PERSON FOR SITE VISIT IS RIC LE GRANGE AT (225) 219-4314.

THIS SIGNED STATEMENT CERTIFIES THAT THE VENDOR NAMED BELOW HAS VISITED THE JOB SITE AND IS FAMILIAR WITH ALL CONDITIONS SURROUNDING FULFILLMENT OF THE SPECIFICATIONS FOR THIS PROJECT.

VENDOR'S COMPANY NAME

STATE AGENCY'S NAME

VENDOR'S SIGNATURE

AGENCY'S SIGNATURE

**TECHNICAL SPECIFICATIONS FOR
NEW WOOD SHOP AND STORAGE BUILDING**

**CHICOT STATE PARK
VILLE PLATTE, LOUISIANA**

**PREPARED BY:
RESOURCE DEVELOPMENT SECTION
OFFICE OF STATE PARKS
DEPARTMENT OF CULTURE, RECREATION AND TOURISM
DATE: June 05**

TABLE OF CONTENTS

DIVISION 1 - GENERAL REQUIREMENTS	01000-3 THRU 7.
DIVISION 2 - SITE WORK	02000-1.
DIVISION 3 - CONCRETE FORMWORK	03100-1 THRU 2.
CONCRETE REINFORCEING	03200-1 THRU 3.
CAST-IN-PLACE CONCRETE	03300-1 THRU 6.
DIVISION 6 - CARPENTRY	06200-1 THRU 2.
DIVISION 7 - JOINT SEALERS	07900-1 THRU 3.
DIVISION 8 - STANDARD STEEL DOORS AND FRAMES	08111-1 THRU 2.
OVERHEAD DOORS	08333-1.
BUILDING HARDWARE	08710-1 THRU 4.
DIVISION 9 - PAINTING	09900-1 THRU 7.
DIVISION 13- PRE-ENGINEERED BUILDING	13120-1 THRU 14.
DIVISION 15 - WATER SUPPLY	15300-1 THRU 2.
DIVISION 16 - ELECTRICAL SYSTEMS	16000-1 THRU 14.

TECHNICAL SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01010 - SUMMARY OF WORK

- 1.1 The Contractor shall provide all labor, materials and equipment necessary to complete the following items of work:
 - 1) Clear necessary area to build a 90'x90', pre-manufactured maintenance building with a new limestone pad per site plan.
 - 2) Footprint of building will be raised per Site Plan with compacted fill. The fill for the building foundation will be put in 6" lifts as needed and compacted to 90% before next lift is spread. Lime can be used if needed to compact soil to 90%.
 - 3) The building will then be built according to the following specifications.
 - 4) The new limestone pad will have minimum 4" depth of 610 limestone spread over it. Geotextile will be used under the limestone. A pre-approved geotextile is Exxon GTF 300
 - 5) A chain link fence will be constructed around the building to enclose the area as shown on site plan to match the existing perimeter chain link fencing.
 - 6) Connecting the building to all utilities is the responsibility of the contractor. Coordinate with Park staff all utility connections.
- 1.2 Unless specified otherwise all materials shall be new, manufactured items suitable for their intended use, installed according to manufacturer's directions or customary good trade practices, and in all cases materials and workmanship shall comply with all applicable building codes. Workmanship shall be at least as good as normal good trade practices with all lines, elevations, surfaces, finishes, etc. like those shown in the plans.

SECTION 01015 - CONTRACTOR'S USE OF PREMISES

- 1.1 The Contractor shall have free use of restrooms and reasonable use of electrical power and water for construction purposes. In no way shall the contractor's use of the park impair the park's use or condition. The contractor shall promptly repair any damage to the satisfaction of the Inspector.
- 1.2 Free lodging of laborers on grounds is not permitted. Further, the contractor shall be subject to all other Park Regulations applying to the public.
- 1.3 The Contractor shall schedule his work to provide no interference with park visitation and shall keep utility outages to the minimum length required for construction.

SECTION 01041 – PROJECT COORDINATION

- 1.1 The Project Manager shall be the Office of State Parks' Ric Le Grange (225) 219-4314 and his decision shall be final in all interpretations of the plans and these specifications. All communications shall be through the Project Inspector. Cooperate with the park manager in all matters pertaining to scheduling correlations with the public.

SECTION 01050 – FIELD ENGINEERING

- 1.1 The contractor is responsible for all quantities, measurements, and grades. Provide rough and final staking, elevations and benchmarks as required by the Inspector for the approval.

SECTION 01051 – GRADES, LINES AND LEVELS

- 1.1 All construction shall be plumb, level, and true to the lines shown on the plans. All slopes shall be consist and drain as intended. The Inspector shall instruct the contractor on any incidental construction that may be necessary to accomplish a functional project. Slope to drain always.

SECTION 01060 – REGULAR REQUIREMENTS

- 1.1 Obtain all permits, pay all fees, record the contract, and comply with all state, federal, and local requirements. All construction shall comply with the Louisiana Building Code for State-Owned Buildings. If any provision of these specifications or the plans is in conflict with any code, the contractor shall notify the Inspector before construction or the contractor shall make remedial changes to bring the work into compliance at no additional cost to the state.
- 1.2 Safety is part of this contract. Abide by OSHA and all other safety regulations and take all other measures necessary (such as barriers, fences, warning signs, protective clothing, etc.) to protect the public and workmen.
- 1.3 Temporary Scaffolds, Staging, and Safety Devices - The contractor shall provide, erect, maintain and remove, when directed, all scaffolding, staging, platforms, temporary flooring, temporary runways, guards, railing, stairs, and ladders necessary for reaching all portions of the work conveniently and safely and as required by local, federal and state codes or laws for the protection of workmen and the public. The construction, inspection and maintenance of the above items shall comply with all safety codes and regulations, as applicable to the project.
- 1.4 Fire Protection - Verify availability and location of existing onsite fire protection equipment. Provide additional temporary equipment as required by applicable safety standards.

GENERAL REQUIREMENTS

01000-4

SECTION 01150 – MEASUREMENTS AND PAYMENTS

- 1.1 Bids - The Contractor's bid shall be lump sum with no qualifications, informalities, or item payments or the bid will be disqualified.
- 1.2 Add alternates - If add alternates are part of project the contractor shall note them and their amount on his bid. The low bid, including any add alternates, will be accepted if that bid is within the construction budget, otherwise the bid will be awarded on the basis of the base bid.
- 1.3 Partial payments - See Progress Payments and Acceptance in bid documents. If the contractor requests partial payments, they shall be made using the invoice and schedule of values forms supplied in these specifications. The approved schedule of values shall be based upon the divisions of these specifications except that the value of Division One shall be zero. Upon completion of the project (acceptance), payment will be authorized for 90% of the contract amount (10% retainage) less the value of all punch list items, which shall be computed at 2.5 times the actual cost of the punch list. No partial payments on the punch list. The Inspector's decision on payment approval shall be final.
- 1.4 Change orders - All changes in the work involving the contract amount, scope of work, or contract time shall be made only by change orders. Change orders shall be prepared by the contractor as directed by the Inspector and approved by State Purchasing and the Inspector prior to any changes. Change orders shall contain:
 - a) An itemized list of material and labor costs for each subcontractor's work including quantities and unit costs for each item of labor and each item of material.
 - b) Same as above for contractor's labor and material.
 - c) Overhead and profit.
 - d) Time extension for extra work or acts of God.
- 1.5 Quantities - All quantities and dimensions expressed in the plans and these specifications reflect the intent of the project and best knowledge of State Parks. They are for the guidance of the Contractor and shall be verified by the Contractor. If discrepancies or errors exist, the inspector shall be notified prior to construction.

SECTION 01200 – PROJECT MEETINGS

A PRE BID MEETING TO BE HELD AT THE JOB SITE ON 10/27/05 AT 10:00 A.M.

- 1.1 A pre-bid conference will be held at the job site and prospective bidders are expected to be familiar with site conditions and bid procedures. After the contract is let, a pre-construction conference shall be held before commencing work. Progress meetings shall be held at least monthly to review the progress and quality of the work and to review requests for partial payment. At the completion of work, a Final Inspection shall be held

after at least a three (3) day notice by the Contractor to prepare a punch list (if necessary) of items to be addressed before acceptance.

SECTION 01300 – SUBMITTALS

- 1.1 As equal determinations- Manufacturer's brand names, colors and models numbers are used for the sole purpose of obtaining competitive bids. Substitutions of products of other manufactures equal to or superior to those listed may be acceptable if approved by the Inspector prior to bidding. Otherwise, the Contractor's substitution may be rejected. For a substitution to be pre-approved by the Inspector, the Contractor may submit, ten (10) days before bid date, samples, brochures, and technical data sufficient for the Inspector to make a decision.
- 1.2 Packaging -The Contractor shall retain all packaging and supplier's invoices in neat, clean, dry, legible condition for the Inspector to determine compliance with these specifications.
- 1.3 Shop drawings - Submit shop drawings wherever required by the plans, these specifications or when required by the inspector. Such drawings shall be drafted, dimensioned, and scaled drawings clearly showing the contractor's intended plan, materials and the like.

SECTION 01510 – TEMPORARY UTILITIES

- 1.1 Provide temporary utilities as needed at no additional cost to the State.

SECTION 01700 - CONTRACT CLOSEOUT

- 1.1 See bidding and contract requirements regarding Final Payments and project meetings regarding acceptance, punch list, and final inspection. After completion, the Contractor shall remove all scraps, forms, packaging, debris, spatters, dust, dirt, etc., and leave the work in a neat and clean condition with all facilities ready for use by the Office of State Parks. Salvageable materials remain the property of the State and shall be delivered to the Park Manager. Materials deemed waste by the Inspector shall be removed from the park by the Contractor.

SECTION 01740 - WARRANTIES AND BONDS

- 1.1 All materials and workmanship shall be warranted for a period of one (1) year.

END OF SECTION 01000

DIVISION 2 – SITE WORK

SECTION 02100 - SITE PREPARATION

- 1.1 Area to be cleared will be staked at the pre-construction conference by the project inspector. All brush, trees and grass will have to be cleared prior to bringing any fill material on the site. The limits of clearing will be 10' beyond the new fence line each side. All materials cleared from the site must be disposed of off site.

SECTION 02200 - EARTHWORK

- 1.1 Area will be scarified to a depth of 6" prior to compaction. Existing soil is to be compacted to 90 %. Approved Soil will then be brought in 6" lifts to create a compacted thickness of 6" above grade over the entire area and 12" above grade for the building area. Lime can be used to achieve compaction but should only be used if necessary. Fenced area should be sloped to drain (2% - 4%) away from the building.

SECTION 02440 – CHAIN LINK FENCING

- 1.1 The contractor shall provide shop drawings to the project manager for approval of chain link fencing and swings gates. The chain link fencing and gates shall match the existing perimeter chain link fencing for the maintenance area in height and size, post interval, fabric gauge and branching. The project manager shall approve the final chain link fencing layout and gate position prior to construction.

SECTION 02585 - GEOTEXTILE

- 1.1 Geotextile will be used under all limestone surfaces. A pre-approved Geotextile is Exxon GTF 300 all others will have to be approved by project inspector. Sheets of geotextile should overlap a minimum of 1' on the sides and 2' on the ends.

SECTION 02512 - ROCK PAVING

- 1.1 The entire fenced area will have minimum 4" depth of 610-limestone spread over it. Geotextile will be used under the limestone. A pre-approved geotextile is Exxon GTF 300.

END OF SECTION 02000

DIVISION 3 - CONCRETE

SECTION 03100 - CONCRETE FORMWORK

PART 1- GENERAL

- 1.1 Provide all materials, labor, equipment and incidental services for the installation of all forms for structural concrete.
- 1.2 Contractor shall adjust formwork construction as required to accommodate all inserts, openings, chases, thimbles, etc. necessary to complete work of the trades described in architectural, mechanical and electrical contract documents.
- 1.3 Forms shall have sufficient strength to withstand all forces resulting from placement and vibration of the concrete and shall have sufficient rigidity to maintain specified tolerances.

PART 2 - PRODUCT

- 2.1 Earth cut may be used as forms for footings and interior grade beams if the surfaces can be held true to line and grade. Earth cut forming may not be used on concrete surfaces to be exposed. If a previously acceptable earth cut form is ruined by rain, sloughing or other such phenomenon, the contractor shall remove reinforcing steel, re-excavate and provide form materials as required to meet specified tolerances.
- 2.2 All lumber and plywood shall be sound and undamaged and shall conform to requirements of ACI special Publication No. 45, Formwork for Concrete.
- 2.3 For exposed concrete surfaces, use form liners or special coatings to prevent wood grain marks on the concrete surface.
- 2.4 Forms for voids shown on the drawings to protect grade beams and slab from swelling clays shall be commercially manufactured for this purpose. Forms shall be double-faced corrugated fiberboard constructed of wet strength paper impregnated with wax and laminated with moisture resistant adhesive. Protect forms from moisture prior to installation. If forms become water soaked after installation, do not pour concrete until forms have thoroughly dried and gained full original strength. All reinforcing steel supported on the form shall be carried on slab bolsters with runners to prevent puncture of the forms. If excavations are not level within specified tolerances, set forms in a leveling course of clean sand. Do not place moisture vapor barriers beneath the forms.

PART 3 - EXECUTION

- 3.1 Construct all formwork so as to insure that the concrete surfaces will not exceed the following tolerances:
 - A. Footing Dimensions:
 1. Plan Plus 6 inch; minus 0 inch
 2. Depth Plus 4 inch; minus 0 inch

- B. Slab variation from the designated plane ... $\frac{1}{4}$ inch per 10 feet but not more than $\frac{1}{2}$ inch.
- C. Variation from designated elevation (top and bottom of slabs and beams) $\frac{1}{2}$ inch.
- D. Variation of the building line from established position 1 inch.
- E. Variation in cross-sectional dimensions of the beams and in thickness of slabs and walls plus $\frac{1}{2}$ inch; minus $\frac{1}{4}$ inch.

3.2 Where tolerances do not apply, all tolerances shall comply with those suggested in ACI 347-77 "Recommended Practice for Concrete Formwork".

3.3 Forms shall not allow leakage of cement paste.

3.4 Form coatings to prevent bond with concrete shall be applied before reinforcing is placed. Coating material shall not be allowed to stand in puddles within the forms; nor be allowed to contact concrete against which fresh concrete is to be placed.

3.5 ACCESSORIES AND INSERTS

- A. Form accessories to be wholly or partially embedded in the concrete, such as ties and hangers, shall be a commercially manufactured type and shall break off not less the one inch within the concrete surface.
- B. All inserts necessary for connecting work shall be securely fastened in proper position before concrete placement begins.

3.6 FORM REMOVAL

- A. All structural members shall be adequately shored until control cylinder tests indicate the concrete has reached its specified 28-day compression strength.
- B. Side forms for grade beams may be removed 24 hours after concrete is placed.
- C. When side forms are removed within 48 hours of pour, these formed surfaces shall be cured by damp mats or curing compounds as herein specified.
- D. Immediately after stripping forms remove all projections and patch surface defects with mortar paste of same proportions as concrete. Defects which expose reinforcing steel or which extend over an area greater than 200 square inches shall not be repaired until inspected by Project Manager.

END OF SECTION 03100

SECTION 03300- CAST-IN-PLACE CONCRETE

PART 1-GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

- A. Provide all cast-in-place concrete, complete, in place, as indicated on the Drawings, specified herein and needed for a complete and proper installation.
- B. All concrete shall conform with the provisions of the latest edition of the following standards, as specified in this Section. In case of conflict between the referenced standards and these Specifications, the more stringent requirements shall govern:
 - 1) ACI - American Concrete Institute
 - 2) ASTM - American Society for Testing and Materials
- C. Unless specifically waived by the Project Manager, test all concrete for quality. Prior to all work in this Section, make all necessary arrangements with the testing laboratory. The laboratory shall test, and furnish certified reports on the measured slump, and compressive strength developed at 7 and 28 days, as detailed in Part Three in this Section.
- D. Provide mix designs showing components and proportions for mixes proposed for use on the project. Provide at least four sets of test results demonstrating that the proposed mixes have consistently met the design strength in previous uses. Submit to structural engineer prior to placement.
- E. Use all means necessary to protect the concrete before, during, and after installation and to protect the work and materials of all other trades.
- F. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Project Manager and at no additional cost to the Owner.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Provide portland cement conforming to the requirements of ASTM C 150, Type 1, latest edition, except high-early-strength portland cement shall conform to Type III requirements.

- B. Provide fine and course aggregates conforming to requirements of the State of Louisiana Standard Specifications for Highway Construction (latest edition) - Class 47B gradation for sand and gravel.
- C. Water used as an ingredient in concrete shall be clean, potable, and free of foreign matter.
- D. Comply with the requirements of ASTM C 94, latest edition. Aggregate shall consist of a graded mixture as specified above. Furnish a minimum cement content as required to provide the specified strength.
- E. Slump shall be selected by the Contractor as required by placement conditions and methods. Where high slump is required for proper placement of the concrete, slump shall be achieved by use of appropriate admixtures and not by use of additional water.
- F. At the job site, water may be added to ready-mix concrete, but only to bring the batch up to the allowable water/cement ratio. Any concrete taking its initial set before placing shall be removed from the site.

2.2 MIX DESIGNS AND STRENGTHS

- A. All Concrete: Provide a SG-3500 mix design concrete which develops a minimum compressive strength of 3500 PSI at the end of 28 days (Sand gravel mix). Water/cement ratio shall not exceed 0.51.

2.3 ONCRETE ADMIXTURES

- A. Water reducing admixtures: Admixtures shall conform to ASTM C 494, Type A for water reducing and Type D for water reducing/set retarding use.
- B. Calcium chloride: Do not use calcium chloride in any concrete.
- C. Fly Ash shall not be used.

2.4 CURING MATERIALS

- A. No liquid curing and sealing compound will be allowed for concrete slab. All concrete shall be "wet" cured.

PART 3 – EXECUTION

3.1 CONCRETE PLACEMENT

- A. Place concrete in compliance with the practices and recommendations of ACI 304 and as herein specified.

- B. Do not place concrete until Project Manager has been notified and given an opportunity to inspect sub-base and/or forms.
- C. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the section. Perform concrete placing at such a rate that concrete which is being integrated with fresh concrete is still plastic. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to any procedure which will cause segregation. Screed concrete which is to receive other construction to the proper level to avoid excessive skimming and grouting. Do not use concrete which becomes non plastic and unworkable, or does not meet the required quality control limits, or which has been contaminated by foreign materials. Remove rejected concrete from the site and dispose of in an approved location.
- D. Place the specified granular fill in all areas to receive concrete sidewalks, interior slabs on grade, and other locations as shown on Drawings. Install the specified vapor barrier under all interior concrete slabs. Lap the joints 24" minimum and turn the vapor barrier up 3 " at all slab edges abutting walls. If shown on the Drawings, install slab edges insulation, or perimeter sub-slab insulation. Moisten sub base and forms with a fine spray of water, just prior to placement procedures. Deposit and consolidate concrete slabs in a continuous operation, within the limits of construction joints, until the placing of a panel or section is completed. Consolidate concrete during placement, thoroughly working concrete around reinforcement and into comers. Consolidate concrete in remainder of slabs by vibrating bridge screeds, roller pipe screeds, or other methods acceptable to the Project Manager. Limit the time of vibrating consolidation to prevent bringing an excess of fine aggregate to the surface. Bring slab surfaces to the correct level with a straight edge, and then strike off. Interior slabs in areas requiring a floor or area drain shall be sloped to the drain as shown on the Drawings. If not shown, slope to drain at a uniform rate of 1/8" per foot. Exterior slabs, platforms and walks shall be sloped as shown, or to drain properly and be free of all standing water at all times. Use bullfloats or darbies to smooth the surface, leaving it free from bumps or hollows. Do not sprinkle water on any plastic surface, and do not disturb the slab surfaces prior to the start of finishing operations.
- E. Check excavations for proper locations and dimensions. Level bottom of excavation and remove all loose soil in accordance with the Project Manager.
- F. Comply with ACI 306, "Recommended Practice for Cold Weather Concreting" and as specified herein, to protect all concrete work from physical damage and reduced strength due to- frost, freezing actions, or low temperatures. Do not place concrete while the air temperature is below 40 degrees F.
- G. Comply with the requirements of ACI 305, "Recommended Practice for Hot Weather Concreting". When hot weather conditions exist which would seriously impair the quality and strength of concrete, place the concrete as follows:

- 1) Maintain concrete temperatures at the time of placement below 100 degrees F. Use chilled mixing water or chopped ice as required;
- 2) Wet forms and sub-grade thoroughly with a fine spray of water, just prior to concrete placement.
- 3) Use set-control admixtures in the mix;
- 4) Cure concrete slabs as specified in this Section.

3.2 CONSOLIDATION

- A. Consolidate all concrete in accordance with the provisions of ACI 309, "Recommended Practice for Consolidation of Concrete". Consolidate each layer of concrete immediately after placing, by use of internal concrete vibrators supplemented by hand-spading, rodding or tamping, so that the concrete is thoroughly worked around all reinforcement, around embedded items, and into comers of forms. Eliminate all air or stone pockets which may cause honey-combing, pitting or planes of weakness. Do not use vibrators to transport concrete inside of forms. Do not vibrate forms or reinforcement.
- B. Provide adequate numbers of vibrators and power sources at all times. Maintain spare vibrators on hand to ensure adequacy. The Project Manager may order a delay in further concrete placement, if equipment being used is not adequate to accomplish proper consolidation.
- C. Procedures: Use the vibrator to melt down the concrete as it is being placed, and use the vibrator to consolidate the mass of concrete. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than the visible effectiveness of the machine. At each insertion, limit the duration of vibration to the time necessary to consolidate the concrete and complete embedment of reinforcement and other embedded items without causing segregation of the mix. Insert the vibrator so as to penetrate the lift immediately below the one being placed, and manipulate to blend the two lifts. Do not insert the vibrator into lower courses which have begun to set.

3.3 CONCRETE FINISHING

- A. Apply trowel finish to monolithic slabs surfaces that are to be exposed to view, and to slab surfaces that are to be covered with resilient flooring or carpet. After floating, begin troweling operation using either power-driven trowels or hand trowels. Consolidate concrete surfaces by final handtroweling operation, free of trowel marks, uniform in texture and appearance, and with a surface plane tolerance conforming to "Standard Tolerances for Concrete Construction and Materials" (ACI 117-8 1). Grind smooth those surface defects which would telegraph through applied floor covering system.
- B. Apply non-slip broom finish to exterior concrete porches, walks, drives and parking areas. Immediately after trowel finishing, slightly roughen concrete surface with fiber bristle broom. Broom perpendicular to main traffic route. Coordinate the required finish with the Structural Engineer prior to application.

3.4 CURING AND PROTECTION

- A. Protect freshly placed concrete from premature or too rapid drying and from excessive cold or hot temperatures. Maintain concrete at a relatively constant temperature for a period of time necessary for hydration of cement and proper hardening. Start curing as soon as free water has disappeared from concrete surfaces after finishing of concrete. Conform to the latest edition of ACI 308, "Standard Practice for Curing Concrete", for curing procedures.
- B. Perform curing of concrete by one of the following methods or a combination of these methods:
 - 1) Moisture curing method by keeping concrete surfaces continuously wet by, covering with water, or by a continuous water spray, or with water saturated burlap.
 - 2) Moisture cover curing method by covering concrete surfaces with polyethylene moisture retaining cover. Lap all joints 12 " minimum and repair all tears.
- C. Cure unformed surfaces such as slabs, floor topping and other flat surfaces by methods specified above, as applicable. Where liquid membrane curing compounds cannot be used because of required applied finishes, cure by moisture curing or moisture cover curing or combination thereof

3.5 REMEDIAL WORK

- A. Reinforce or replace deficient work as directed by the Project Manager and at no additional cost to the Owner.
- B. Repair defective areas and fill form-tie holes and similar defects in accordance with Chapter 9 of ACI 301. Where surface defects such as honeycomb occur, repair the defective areas as directed by the Project Manager.

3.6 INSPECTIONS

- A. The Project Manager shall be notified when footing excavations or forming are complete and reinforcing steel is secured in place. Give a minimum 24 hours notice.

3.7 CONCRETE TESTING

- A. Employ the specified testing laboratory to perform all tests required and submit test reports.
- B. Make compression strength tests in accordance with ASTM C39. Mold 4 cylinders for each test required. Make and cure all test specimens in accordance with ASTM C3 1.

Perform slump test for each set of cylinders molded for required compressive strength tests. Make slump test in accordance with ASTM C143.

- C. Mold compression strength test cylinders for each day's pour of concrete and for each class of concrete placed in any one day. Test cylinders at 7 and 28 days with the 4th cylinder retained in reserve for later testing, if required.
- D. The testing laboratory will make additional tests of in place concrete as directed by the Project Manager when test results indicate the specified concrete strengths and other characteristics have not been-attained. The testing laboratory may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42, or by other methods, as directed. The Contractor shall provide all remedial work required to patch test holes and shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.
- E. Test results shall be reported in writing to the Project Manager and the Contractor within 2 days of time tests are made. Reports shall contain the testing laboratory's name, project name, date of concrete placement, concrete type and class, location of placement in structure, design strength at 28 days, and actual compressive breaking strength and type of break for both 7-day and 28-day test.

END OF SECTION 03300

SECTION 06200-CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Provide all carpentry labor, items needed for a complete and proper installation including, but not necessarily limited to:
- 1) Provide all wood, and all other items needed to fabricate the Work Benches and Shelving units described in this Section.

1.2 QUALITY ASSURANCE

- A. Standards: Comply with standards for grading and workmanship per the "Woodwork Quality Standards and Guide Specifications" or "American Woodwork Institute (AWI).
- B. Qualifications of installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 SUBMITTALS

- A. Furnish Shop Drawings and materials list for the workbench and shelving units.
- B. All fasteners data information sheets.

PART 2 - PRODUCTS

2.1 GRADE STAMPS

- A. Framing lumber: Identify all framing lumber by the grade stamp of the Western Spruce-Pine-Fir Association (WSPFA), the Western Wood Products Association (WWPA), the Southern Forest Products Association (SFPA) or Southern Yellow Pine (SYP).
- B. Plywood: Identify all plywood as to species, grade, and glue type by the stamp of the American Plywood Association.

2.2 MOISTURE CONTENT

All lumber shall be kiln-dried and surfaced with a moisture content not to exceed 19%.

2.3 FASTENERS

Provide exterior grade deck screw fasteners properly selected and sized for the material to be fastened and the substrate to which the material will be fixed, designed to develop proper and adequate strength commensurate with the use.

2.4 OTHER MATERIALS

All other materials, not specifically described but required for a complete and proper installation as indicated on the Drawings, shall be new, suitable for intended use, and subject to the approval of the Project Manager. All wood shall have a range of moisture content from 6 to 11 percent, and shall be dressed free of tool marks and other objectionable defects.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2. WORKMANSHIP

- A. General: All carpentry shall produce joints true, tight, and well screws, with all members assembled in accordance with the Drawings and with all pertinent codes and regulations. Set rough carpentry work accurately to required levels and lines, with members plumb and true.
- B. Selection of lumber pieces: Carefully select all members. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing or making connections. Cut out and discard all defects, which will render apiece unable to serve its intended function. The Project Manager may reject lumber whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

END OF SECTIONS 06200

SECTION 07900 - JOINT SEALERS

PART 1 - GENERAL

1.1 SUBMITTALS

- A. In addition to product data submit the following:
 - 1. Samples of each type and color of joint sealer required.
 - 2. Certified test reports for joint sealers evidencing compliance with requirements.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under service and application conditions, as demonstrated by testing and field experience.
- B. Colors: Provide color of exposed joint sealers as selected by Architect from manufacturer's standard colors.

2.2 ELASTOMERIC JOINT SEALERS

- A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated, complying with ASTM C 920 requirements.
 - 1. One-Part Nonacid-Curing Silicone Sealant: Type S, Grade NS, Class 25, Uses NT, M, G, A, and O.
 - a. Additional capability, when tested per ASTM C 719, to withstand the following percentage changes in joint width as measured at time of application and still comply with other requirements of ASTM C 920:
 - 1) 50 percent movement in both extension and compression for a total of 100 percent movement.
 - 2) One-Part Mildew-Resistant Silicone Sealant: Type S; Grade NS; Class 25; Uses NT, G, A, and O; formulated with fungicide; intended for sealing interior joints with nonporous substrates exposed to high humidity and temperature extremes.
 - 3) Multi-Part Pourable Urethane Sealant for Use T: Type M, Grade P, Class 25, Uses T, M, A, and O.
 - 4) One-Part Pourable Urethane Sealant for Use T: 6. Chicot SP July 20, 2005) Type S, Grade P, Class 25, Uses T, M, A, and O.

- 3) Multi-Part Pourable Urethane Sealant for Use T: Type M, Grade P, Class 25, Uses T, M, A, and O.
- 4) One-Part Pourable Urethane Sealant for Use T: 6. Chicot SP July 20, 2005) Type S, Grade P, Class 25, Uses T, M, A, and O.

2.2 LATEX JOINT SEALANTS

- A. Acrylic-Emulsion Sealant: Manufacturer's standard, one-part, non-sag, acrylic, mildew-resistant, paintable, acrylic emulsion sealant complying with ASTM C 834.
- B. Silicone- Emulsion Sealant: Manufacturer's standard one-part, non-sag, mildew-resistant, paintable, silicone-emulsion sealant complying with ASTM C 834.
- C. Acoustical Sealant for Concealed Joints: Manufacturer's standard, nondrying, non-hardening, non-shrinking, non-staining, gunnable, synthetic rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound.
- D. Foam-in-place Fire-stopping Sealant: Two-part, foam-in-place, silicone sealant for use as part of a through-penetration fire-stop system for filling openings around cables, conduit, pipes and similar penetrations through walls and floors, with fire-resistance rating indicated, per ASTM E 814; listed by UL or other testing and inspecting agency acceptable to authorities having jurisdiction.
- E. One-Part Fire-Stopping Sealant: One part elastomeric sealant formulated for use as part of a through-penetration fire-stop system for sealing openings around cables, conduit, pipes and similar penetrations through walls and floors, with fire-resistance rating indicated, per ASTM E 814; listed by UL or other testing and inspecting agency acceptable to authorities having jurisdiction

2.4 JOINT SEALANT BACKING

- A. Sealant Backing, General: Non-staining; compatible with joint substrates, sealants, primers and other joint fillers; approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
 1. Plastic Foam Joint-Fillers: Preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of material indicated below, and odd size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
 - a. Either flexible, open-cell polyurethane foam or non-gassing, closed-cell polyethylene foam, unless otherwise indicated, subject to approval of sealant manufacturer.

2. Elastomeric Tubing Joint-Fillers: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, capable of remaining resilient at temperatures down to -26 degrees F. (-15degrees C) Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth and otherwise contribute to optimum sealant performance.

3. Bond-breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing bond between sealant and joint filler or other materials back of joint.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: As recommended by joint sealer manufacture where required for adhesion of sealant to joint substrates indicated.
- B. Accessory Materials for Fire-Stopping sealants: Forming, joint-fillers, packing and other accessory materials as required for installation of fire-stopping sealants.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. General: Comply with joint sealer manufacturer's instructions applicable to product and applications indicated.
- B. Elastomeric Sealant Installation Standard: Comply with ASTM C 962.
- C. Latex Sealant Installation Standard: Comply with ASTM C 790.
- D. Acoustical Sealant Application Standard: Comply with ASTM C 919 for use of joint sealant in acoustical application.
- E. Installation of Fire-Stopping Sealant: Install sealant, including forming, packing and other accessory materials to fill openings around mechanical and electrical services penetrating floor and walls to provide fire-stops with fire resistance ratings indicated.

END OF SECTION 07900

SECTION 08111 – STANDARD STEEL DOORS AND FRAMES

PART 1 – GENERAL

1.1 SUBMITTALS

- A. Using manufacturer's standard details and specifications for steel doors and frames, submit shop drawings showing application to project, as required.

1.2 REFERENCE STANDARDS

- A. In addition to other specified requirements, comply with Steel Door Institute "Recommended Specifications for Standard Steel Doors and Frames" ANSI / SDI-100.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. One of the following, or approved equal:
 - 1. Amweld
 - 2. Ceco Corp.
 - 3. Curries Company
 - 4. Fenestra Corp.
 - 5. Kewanee Corp.
 - 6. Mesker Door Co.
 - 7. Premier Products, Inc.
 - 8. Republic Builders Products
 - 9. Steelcraft Manufacturing Co.

2.2 MATERIALS

- A. Hot-rolled Steel Sheets and Strips: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.
- B. Cold-rolled steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.
- C. Galvanized Steel Sheets: Zinc-coated carbon steel sheets of commercial quality, complying with ASTM A 526, or drawing quality, ASTM A 642, hot dipped galvanized in accordance with ASTM A 525, with A60 or G60 coating designation, mill phosphatized.
- D. Supports and Anchors: Fabricate of not less than 18-gauge sheet steel.
- E. Shop Applied Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints complying with ANSI A224.1.

2.3 FABRICATION

- A. Fabricate unit to be rigid, neat in appearance, and free from defects, warp or buckle. Weld exposed joints continuously, grind, dress, and make smooth, flush and invisible.
- B. Prepare steel doors and frames to receive mortised and concealed finish hardware, including cutoffs, reinforcing, drilling and tapping, complying with ANSI A 115 "Specifications for Door and Frame Preparation for Hardware".
 - 1. Reinforce units to receive surface-applied finish hardware to be field applied.
 - 2. Locate finish hardware as indicated or, if not indicated, per DHI "Recommended Locations for Builder's Hardware".

2.4 DOORS AND FRAMES

- A. Doors: SDI grades and models specified below or as indicated on drawings or schedules:
 - 1. Exterior Doors: ANSI / SDI-100, Grade III, Exterior heavy-duty, minimum 16-gauge galvanized steel faces as indicated in compliance with SDI 112, Polystyrene insulation.
- B. Frames: Comply with ANSI/ SDI-100, of the types and styles indicated, for materials quality, metal gauges, and construction details.
 - 1. Provide flat panel hollow metal frames for doors, transoms, sidelights, borrowed lights, and other openings as indicated. Provide glazing stops as required. Provide 12 gauge Channel head adapters where required.
 - a. Fabricate frames with mitered, coped, or welded corners. Fabricate frames knocked-down for installation in existing masonry openings.
 - 2. Prepare frames to receive 3 silencers on strike jambs of single-door frames.
 - 3. Form frames at exterior opening from 16-gauge galvanized steel.
 - 4. Provide galvanized doors and frames at all exterior hollow metal doors.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install metal units in accordance with manufacturer's instructions and final shop drawings. Fit doors to frame and floor with clearances specified in ANSI / SDI-100.
 - 1. Install frames in accordance with SDI 105.
 - 2. Door hardware and installation is per Section 08710.

END OF SECTION 08111

SECTION 08333 – OVERHEAD DOORS

PART 1 – GENERAL

1.1 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with required, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
1. Atlas Door TDD, Model S23PS.
 2. Gadco, Model 4726.
 3. Overhead Door Co., Model 1959.

2.2 MATERIALS

- A. Sectional Overhead Doors: Provide complete operating door assemblies including frames, 26-gauge galvanized and painted steel panels, sections, brackets, guides, tracks, counterbalances, hardware, operators, and installation accessories. Raised panels, insulated.
- B. Tracks, Supports and accessories: Manufacturer's standard galvanized steel, sized for door weight and dimensions, complete with roller guides, brackets, bracing and reinforcing. Provide continuous rubber or neoprene weather-stripping at top and bottom of door.
- C. Hardware: Manufacturer's standard, to suit size and type of door. Provide lifting handles, cremone type locking bars operable from inside and outside with chromium-plated operating handle and cylinder lock.
- D. Finish: Color shall be selected from manufacturer's standard colors by Project Manager.
- E. Counterbalance: Manufacturer's standard torsion spring mechanism, for manual push-up operation.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Set door complete with necessary hardware, jamb and head mold stops, anchors, inserts and hangers in accordance with manufacturer's installation instructions. Doors shall operate independently of each other. Clean and check operation.

END OF SECTION 08333

OVERHEAD DOORS

08333-1

SECTION 08710 – BUILDING HARDWARE

PART 1 – GENERAL

1.1 SUBMITTALS

- A. Related Documents: Division 1 General Requirements are hereby made part of this section.
- B. Work Included:
 - 1. Finish Hardware: Furnish, deliver and install all Finish Hardware as specified herein.
 - 2. Finish Hardware to include all necessary fasteners for proper installation.
- C. Related Work: Refer to appropriate sections for requirements.
 - 1. Hollow Metal Doors and Frames.
 - 2. Special Doors and Frames.
 - 3. Installation.

1.2 REFERENCES

- A. Hardware furnished shall conform to the requirements of the local building code and to the requirements of the ADA.
- B. Hardware shall meet the requirements of all applicable labeling authorities and comply with the requirements of the Door and Frame labels.

1.3 SUBMITTALS

- A. Hardware Schedule: Unless otherwise directed submit six copies of a complete hardware Schedule for approval.
- B. Keying Schedule: Unless incorporated into the Hardware Schedule, submit a separate detailed keying schedule for approval.
- C. Samples: If requested submit a sample of each type of hardware required.
- D. Templates: After approval of the hardware schedule submit templates as required to related trades along with an approved Hardware Schedule to insure proper hardware coordination and installation.
- E. Maintenance Data: Furnish to the owner all available product information data.

1.4 QUALITY ASSURANCE

- A. Substitutions: Hardware other than that listed here in must be approved by addendum to be considered. Proper procedures as set forth in Division 1, General Requirements must be followed when substitutions are requested.
- B. Qualification: The hardware supplier must have in their employee a CERTIFIED ARCHITECTURAL HARDWARE CONSULTANT.
- C. The hardware firm shall have full service capabilities to provide the necessary service to complete the project.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver hardware complete with all fasteners in manufacturer's original packages, marked to correspond with the approved hardware schedule. No direct shipments are allowed.
- B. Handle and store products according to the manufacturer's recommendations and in a manner to prevent damage, deterioration and contamination.

1.6 WARRANTY

- A. Unless otherwise indicated, all items shall be warranted for a period of one year from the date of the owner's acceptance of the project. Door closers shall be warranted for a period of ten years.
- B. In the event of failure, repair or replace any defective hardware at no cost to the owner.
- C. Failures include but not limited to:
 - 1. Faulty operation.
 - 2. Faulty or inadequate design.
 - 3. Improper fabrication or assembly
 - 4. Deterioration of finish.
 - 5. Loosening of fasteners.

1.7 OWNER'S STOCK

- A. Extra Materials
 - 1. One extra key blank for each lock.
 - 2. Furnish one key cabinet and a two tag filing system for 120 percent of all locks furnished.
 - 3. Furnish all necessary tools required for maintenance.
 - 4. One installation instruction sheet for each item furnished.
 - 5. One complete bitting list.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Supply as much Hardware as possible by one manufacturer to maintain continuity of finish, style and to simplify maintenance and replacement.
- B. Acceptable Manufacturers:
 - a. Hinges, McKinney specified; Hager acceptable.
 - b. Locksets, Sargent 7 Line Series specified; LL lever design.
 - 1. Lockset shall meet or exceed requirements of ANSI A156.2 Series400, Grade 2.
 - 2. Locksets shall be non-handed.
 - 3. Locksets shall fit standard 2-1/8" bore (161 prep.)
 - 4. Locksets shall comply with UL 10C and UBC 7-2 requirements.
 - 5. Trim shall be thru-bolted.
 - 6. Latchbolt shall be minimum 1/2" throw, U.L. listed for use on fire doors.
 - 7. Backset shall be 2-3/4" standard.

- c. Exit Devices, Sargent 80 Series specified; Precision 1100 Series is acceptable.
 - d. Door Closers, Sargent 1430 series specified; Norton 8501 Series is acceptable.
 - e. Push, Pulls, Stops, Kick Plates, Flush Bolts, Trimco Specified; Hager is acceptable.
 - f. Thresholds and weatherstrip, National Guard Specified; Hager is acceptable.
- C. Finishes: Shall be US10B (Oiled Rubbed Bronze) or listed in the hardware sets.
- D. References to specified products are used to establish a minimum standard of utility, quality and design. Comparable products which, comply with the operational descriptions, design and functions of the specified items may be acceptable.
- E. The Project Manager reserves the right to approve all items submitted for approval for this project.

2.02 KEYING

- A. Key to existing Master Key System. It is the responsibility of the Hardware Supplier to verify and extend the existing Key System. Any variance from the existing Key System is not acceptable.
- B. Confer with the project manager for exact keying requirements.
- C. Stamp Master Keys, "Do Not Duplicate".
- D. Furnish three keys with each lock.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine all doors, frames and related items for conditions that would prevent the proper application of the Finish Hardware. Do not proceed until defects / conditions are corrected.

3.2 INSTALLATION

- A. Unless otherwise directed, install all hardware in accordance with manufacturer's recommendations.
- B. Apply hardware to the doors as listed in the approved Hardware schedule. Hardware to be installed by skilled workers, with proper equipment.
- C. Install plumb. Level and true to line in strict accordance with manufacturer's printed instructions.

3.3 ADJUSTING AND CLEARING

- A. After installation, check the operation and adjustment of all hardware items as required.
- B. All hardware shall be left clean and free from disfigurement.

3.4 HARDWARE GROUPS

HW SET 1

Doors #1, #2.

Each Door to Receive:

3	Hinges	TA2714- 4 ½ x 4 ½ x 600 x NRP.
1	Deadlock	485
1	Passage Lever Latch	"15" function
1	Door Closer	"CPS" arm
1	Kick Plate	K0050 – 10" x 1-1/2" LWD
1	Threshold	896SDKB
1	Weather stripping	160SDKB
1	Door Sweep	97VDKB

HW SET 2

Overhead Doors #3, #4.

Each door to Receive:

All Hardware By Overhead Door Supplier.

HW SET 3

Chain Link Gates #5.

Each Gate to Receive:

All Hardware By Gate Supplier.

END OF SECTION 08710

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included Paint and finish all exterior and interior exposed surfaces listed on the Painting Schedule in Part Three of this Section, in accordance with the types of finish shown on the Drawings and. as specified herein.
- B. Related work described elsewhere: Priming or priming and finishing of certain surfaces are specified to be factory performed or installer performed under pertinent other Sections.
- C. Work not included: Do not include painting which is specified under other Sections. Unless otherwise indicated, painting is not required on surfaces in concealed areas and inaccessible areas such as furred spaces, foundation spaces, utility tunnels, pipe spaces, duct shafts, etc. Metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze, and similar finished materials will not require painting under this Section, except as may be specified herein.. Do not paint any moving parts of mechanical or electrical operating units. Do not paint over any required labels or equipment identification, performance ratings, or name or nomenclature plates.
- D. Definitions: The term "paint", as used herein, means all coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials whether used as prime or finish coats.

1.2 QUALITY ASSURANCE

- A. Qualification of manufacturer: Products used in the work of this Section -shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.
- B. Qualifications of workmen: Provide at least one person who shall be present at all times during execution of the work of this Section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this Section. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used. In acceptance or rejection of the work of this Section, the Architect will make no allowance for lack of skill on the part of workmen.
- C. Paint coordination: Provide finish coats which are compatible with the prime coats used. Provide barrier coats over non-compatible primers, or

remove the primer and reprime as required. Review other Sections of these Specifications as required, verifying the prime coats to be used and assuring compatibility of the total coating system for the various substrata. Notify the Architect in writing of anticipated problems in using the specified coating systems over prime coating supplied under other Sections.

1.3 SUBMITTALS

- A. Manufacturer's data: Provide submittals containing the following information:
- 1) Complete materials list of all, items proposed to be furnished and installed under this Section;
 - 2) Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements-;
- B. Samples: As requested submit Samples for-the Architect's review. Revise and resubmit each sample as required until the Architect's approval of gloss, color, and texture is achieved.

1.4 PRODUCT HANDLING

- A. Delivery of materials: Deliver all materials to the job site in original, new, and unopened containers bearing the manufacturer's name and label showing at least the following information:
- 1) Name or title of the material,, including color name and number;
 - 2) Manufacturer's name;
 - 3) Contents by volume for major constituents;
 - 4) Thinning instructions;
 - 5) Application instructions.
- B. Storage of materials: Provide proper storage to -prevent damage to, and deterioration of, paint materials.
- C. Protection: Use a means necessary to protect the materials of this Section before, during and after installation and to protect the work and materials of all other trades.
- D. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner

1.5 JOB CONDITIONS

- A. Surface temperatures: Do not apply solvent-thinned paints when the temperature of surfaces to be painted and the surrounding air temperature

are below 45 degrees F, unless permitted by the manufacturer printed instructions. Do not apply water-base paints when the temperature of surfaces to be painted and the surrounding air temperature are below 50 degrees F, unless otherwise permitted by the manufacturer's printed instructions.

- B. Weather conditions: Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85%; or to damp or wet surfaces; unless otherwise permitted by the manufacturers printed instructions. Applications may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods. Do not apply paint in areas where dust -is being generated.

1.6 EXTRA STOCK

- A. Upon completion of the work of this Section, deliver to the Owner a partially used containers of each color, type, and gloss of paint used. Tightly seal each container and clearly label with the contents and location used.

PART 2 - PRODUCTS

2.1 PAINT MATERIALS

- A. Design is generally based on the use of paint products manufactured by Farell-Calhoun or Sherwin Williams and the materials of those manufacturers are generally named in the Painting Schedule.
- B. General: Provide the best quality grade of the various types of coatings as regularly manufactured by paint materials manufacturers approved by the Architect. Materials not displaying the manufacturer's identification as a standard best-grade product will not be acceptable.
- C. Durability : Provide paints of durable and washable quality. Do not use paint materials which will not withstand normal washing as required to remove pencil marks, ink, ordinary soil, and -- similar material without showing discoloration loss of gloss, staining, or other damage.
- D. Colors and glosses: The Architect will select colors to be used in the various types of paint specified and will be the sole judge of acceptability of the various glosses obtained from the materials proposed to be used in the Work.
- E. Undercoats and thinners: Provide undercoat paint produced by the same manufacturer as the finish coat Use only the thinners recommended by the paint manufacturer, and use only to the recommended limits. Insofar as

Practicable, use undercoat, finish coat, and thinner material as parts of a unified system of paint finish.

- F. Standards: Provide paint materials which meet or exceed the standards listed for each application in the Painting Schedule in Part Three of this Section.

2.2 APPLICATION EQUIPMENT

- A. General: For application of the approved paint, use only such equipment as is recommended for application of the-particular paint by the manufacturer of the particular paint, and as approved by the Architect.

- B. Compatibility: Prior to actual use of application equipment, use all means necessary to verify that the proposed equipment is actually compatible with the material to be applied and that the integrity of the finish will not be jeopardized by use of the proposed application equipment.

C. OTHER MATERIALS

1. All other materials, not specifically described but required for a complete and proper installation of the work of this Section, shall be new, first quality of their respective kinds, and as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Inspection: Prior to installation of the work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence. Verify that surfaces to be painted are clean, dry, smooth and at the proper temperature. Verify that painting may be completed in strict accordance with the original design and with the manufacturer's recommendations.
- B. Discrepancies: Do not proceed in areas of discrepancy until all such discrepancies have been fully resolved.
- C. Acceptance The application of paint will be construed as the applicators acceptance of the surface and working conditions accordance

3.2 MATERIALS PREPARATION

- A. General: Mix and prepare painting materials in strict accord with manufacturer's recommendations. . -No hand. mixed paint will be allowed. Store materials not in actual use in lightly covered containers. Maintain

containers used in storage, mixing, and application of paint in a clean condition, free from foreign materials and residue.

- B. Stirring: Stir all materials before application to produce a mixture of uniform density, and as required during the application of materials. Do not stir into the material any film which may form on the surface. Remove the film and, if necessary, strain the material before using.

3.3 SURFACE PREPARATION

- A. General: Perform all preparation and cleaning procedures in strict accordance with the paint manufacturer's recommendations. Remove all removable items which are in place and are - not scheduled to receive paint finish, or provide surface applied protection prior to- surface preparation and painting operations. Following completion of painting in each space or area, reinstall the removed items.
- B. Cleaning: Clean each surface to be -painted prior to applying paint or surface treatment. Remove oil and grease with clean cloths and cleaning solvents of low toxicity and a flash point in excess of 100 degrees F prior to start of mechanical cleaning. Schedule the cleaning and painting so that dust and other contaminants from the cleaning process will not fall onto wet, newly painted surfaces.
- C. Preparation of wood surfaces: Clean all wood surfaces until they are free from dirt oil and all other foreign substance. Smooth all finished wood surfaces exposed to view, using the proper sandpaper. Where so required, use varying degrees of coarseness in sandpaper to produce a uniformly smooth and unmarred wood surface. Unless specifically approved by the - Architect, do not proceed with painting wood surfaces until the moisture content of the wood is 12% or less as measured by a moisture-meter.
- D. Preparation of metal surfaces: Thoroughly clean all surfaces until they are completely free from dirt, oil grease, loose mill scale and other foreign substances. On galvanized surfaces, use solvent for the initial cleaning and then treat the surface thoroughly with phosphoric acid etch. . Remove all etching solution before proceeding. Allow to dry thoroughly before application of paint.

3.4 PAINT APPLICATION

- A. General: Apply each material in strict compliance with the manufacturer's recommendations. Use applicators and techniques best suited for the type of material being applied. Apply each material at not less than the manufacturer's recommended spreading rate, to establish a total dry film thickness as recommended by the manufacturer. Apply additional coats without additional charge, when undercoats, stains or other conditions show

through the final coat of paint, until the paint is of a smooth, uniform finish, color and appearance.

- B. Coats: Give special attention to insure that all surfaces, including edges, comers, crevices, welds and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.
- C. Prime coats: Apply a prime -coat where scheduled. Recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no bum-through or other defects due to insufficient sealing.
- D. Semi-Exposed surfaces: Paint surfaces behind moveable equipment and furniture the same as adjacent exposed surfaces. Paint surfaces behind permanently-fixed equipment or furniture with prime coat only, before final installation of equipment. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat non-specular black paint. Paint the back sides of access panels and removable or hinged covers to match the exposed sides.
- E. Pigmented (opaque) finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, laps, brush marks, runs, sags, or other surface imperfections will not be acceptable.
- F. Transparent (clear ear) finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, nail holes, or other surface imperfections. Provide satin finish for final coats, unless otherwise indicated.
- G. Drying Allow -sufficient drying time between coats. Modify the period as recommended by the material manufacturer to suit weather conditions. Oil-base and oleo-resinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does- not cause lifting or loss of adhesion of the undercoat.
- H. Brush or roller application: Brush or roll out and work all coats onto the surfaces in an even film. Laps, brush marks, runs, sags, and other surface imperfections will not be acceptable.
- I. Spray application: Spray painting of interior walls or exterior surfaces win not be allowed. Confine spray application. to - metal framework and similar surfaces where hand brush work would be inferior. Wherever spray application is used, apply each coat to provide the equivalent hiding of brush-applied coats. Do not double back with spray equipment for the purpose of building up film thickness of one coat in one pass.

- J. Completed work shall match the approved samples for color, texture, and coverage. Remove, refinish, or repaint all work not in compliance with the specified requirements.

3.5 PAINTING SCHEDULE

Exterior metal, ferrous:

First coat: a.) Rust Scat Alkyd Primer 35-111
b.) Kem Kromik Primer

Second coat: a.) Supreme Acrylic Latex Enamel
b.) A-100 Exterior Latex Enamel

Third coat: a.) Supreme Acrylic Latex Enamel
b.) A-100 Exterior Latex Enamel

Exterior metal, galvanized:

First coat: a.) Rust Scat Acrylic Latex Primer 36-11
b.) DTM Acrylic Primer

Second coat: a.) Supreme Acrylic Latex Enamel
b.) A-100 Exterior Latex Enamel

Third coat: a.) Supreme Acrylic Latex Enamel
b.) A-100 Exterior Latex Enamel

3.6 CLEAN-UP AND TOUCH-UP

- A. Clean-up: During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each work day. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of Washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- B. Touch-up: At the completion of work of other trades, touch up and restore all damaged or defaced painted surfaces. Especially in the case of gypsum board painting, painter shall go over his work after completion and repair all damaged spots whether due to defective materials or workmanship or defects of the surfaces covered. In doing touch-up work on wall surfaces previously rolled, use the "dry roller" method of touch-up, not a brush.

END OF SECTION 09900

SECTION 13120 – PRE-ENGINEERED BUILDING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division –1 Specifications sections apply to work specified in this section.

1.2 SUMMARY

- A. Extent of pre-engineered building work is shown on drawings.
- B. The pre-engineered building shown is a single story, single span, rigid frame type metal building of the nominal length, width, eave height and roof pitch indicated. Exterior walls are covered with standard factory panels. Endwalls are expandable.
 - 1. Manufacturer's standard components may be used, providing component, accessories, and complete structure conform to architectural design appearance shown and to specified requirements.
- C. Concrete floor and foundations and installation of anchor bolts are specified in Division – 3.
- D. Sealants and caulking are specified in Division- 7.
- E. Note that option is given to provide clear span structure or to provide columns at midspan with footings indicated.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product information, specifications and installation instructions for building components and accessories.
- B. Shop Drawings: Submit complete erection drawings showing anchor bolts settings, sidewall, endwall, and roof framing, transverse cross sections, covering and trim details, and accessory installation details to clearly indicate proper assembly of building components.
- C. Samples: Submit samples of the following items. Project manager's review will be for color and shape only. Compliance with other requirements is the responsibility of the contractor.
 - 1. 12" long by actual width of the roofing and siding panels, with required finishes.
 - 2. Fasteners for the application of the roofing and siding panels.
 - 3. Sealants and closures.

D. Certification:

1. Submit written Certification prepared and signed by a Professional Engineer, registered to practice in the State where the building is being erected, verifying that building design meets indicated loading requirements and codes of authorities having jurisdiction.
2. Certificate shall also include that the design, fabrication and installation of the entire structure, including all component and connections, shall comply with the requirement of the latest edition of the Standard Building codes, especially with respect to gravity and lateral loading including dead, live and wind loads. Utilize the form at the end of this section.

1.4 QUALITY ASSURENCE

A. Design Criteria:

1. Structural framing: Design primary and secondary structural members and exterior covering materials for applicable loads and combinations of loads in accordance with the Metal Building Manufacturer's Association's (MBMA) "Design Practices Manual".
2. Structural Framing: For design of structural steel member, comply with requirements of the American Institute of Steel Construction's (AISC) "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings" for design requirements and allowable stresses.
3. Light Gage Steel: For design of light gage steel members, comply with requirements of the American Iron and Steel Institute's (AISI) "Specification for the Design of Cold Formed Steel Structural Members" and "Design of Light Gage Steel Diaphragms" for design requirements and allowable Stresses.
4. Welded connections: Comply with requirements of the American Welding Society's (AWS) "Standard Code for Arc and Gas Welding in Building Construction" for welding procedures.

B. Design Loads: Basic design loads, as well as, auxiliary and collateral loads, are indicated on drawings.

1. Basic design loads include live loads, wind load and seismic load, in addition to the dead load.
2. Auxiliary loads include dynamic live loads such as those generated by cranes and materials handling equipment.
3. Collateral loads include additional dead loads over and above the weight of the metal building system such as sprinkler systems and mechanical systems.
4. Design each member to withstand stresses resulting from combinations of loads that produce the maximum allowable stresses in that member as prescribed in MBMA's "Design Practices Manual".

C. Building Accessories:

1. Provide two (2) **electrical space heaters by Dayton - Model # 3E345A** or equal. Contractor shall provide product cut-sheets for approval by project manager prior to purchase.
2. Provide all equipment, piping, connectors hoses, and accessories for a **Central System Dust Collector** for the (5) five power tool locations shown on plan. The Dust collection system shall be a **Delta Model 50-760 or equal** with 1.5 HP motor and 1200 CFM capacities. The Dust Collection system shall be design and installed per manufacture's guideline and recommendations and reviewed and approved by project manager.
3. Accessories such as doors, glass and windows are specified in other sections of the specifications.

D. Manufacturer's Qualifications: Provide pre-engineered metal buildings as produced by a manufacturer with not less than 5 years successful experience in the fabrication of pre-engineered metal buildings of the type and quality required.

E. Erector's Qualifications: Pre-engineered building shall be erected by a firm that has not less than 5 years successful experience in the erection of pre-engineered buildings similar to those required for this project, and that has been licensed by the manufacturer of the building system.

1.5 DELIVERIES, STORAGE, AND HANDLING

- A. Delivery and store prefabricated components, sheets, panels and other manufactured items so that they will not be damaged or deformed.
- B. Stack materials on platforms or pallets, covered with tarpaulins or other suitable weather-tight ventilated coverings. Store metal sheets or panels so that water accumulations will drain freely. Do not store sheets or panels in contact with other materials, which might cause staining.

1.6 MAINTENANCE

- A. Maintenance Stock: Furnish at least 5 % excess over required amount of nuts, bolts, screws, washers, and other required fasteners. Pack in cartons and store on site where directed.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with specified requirements, provide the pre-engineered building systems provided by one of the following:

1. Buildings:

- a. A&M Building Systems, Inc.
- b. A & S Building Systems, Inc.
- c. AMCA Building Division
- d. American Building Co.
- e. American Steel Building Co., Inc.
- f. Armco Atlantic, Inc.
- g. Behlen Manufacturing Co.
- h. Bigbee Steel Buildings, Inc.
- i. Butler Manufacturing Co.
- j. Ceco Building Division
- k. Chief Industries, Inc.
- l. Dean Steel Buildings, Inc.
- m. Farmland Industries, Inc.
- n. Garco Building Systems.
- o. Gulf States Manufacturers, Inc.
- p. Inryco, Inc.
- q. Kirby Building Systems, Inc.
- r. Lear Siegler, Inc., Cuckler Division.
- s. Mesco Metal Buildings Corp.
- t. Package Industries, Inc.
- u. Pascoe Building Systems.
- v. Sonoco Buildings.
- w. Southern Structures, Inc.
- x. Space Metal Buildings.
- y. Star Manufacturing Co.
- z. United Structures of America.
- aa. Whirlwind Steel Buildings, Inc.
- bb. S & S Steel, Inc.

2. Panels, metals and accessories:

- a. Atas Meatl Wall Panels.
- b. ECI Building Components.
- c. McElroy Metal, Inc.
- d. MBCI
- e. Building Manufacturer's Standards

2.2 MATERIALS

A. Metals:

1. Hot-Rolled Structural Shapes: Comply with requirements of ASTM A36 or A529.
2. Tubing or Pipe: Comply with requirements of ASTM A500, Grade B, ASTM A501, or A53.
3. Members Fabricated from plate or bar stock: Provide 42,000 PSI minimum yield strength. Comply with requirements of ASTM A529, A570, or A572.
4. Members Fabricated by Cold Forming: Comply with requirements of ASTM A607, Grade50.
5. Galvanized Steel Sheet: Comply with requirements of ASTM A446 with G90 coating. "Class" to suit building manufacturer's standards.
6. Bolts for structural framing: Comply with requirements of ASTM A307 or A325 as necessary for design loads and connection details.

B. Provide glass fiber blanket insulation at walls and ceiling, of not less than 0.6 lbs. Per cu. ft. density, 3 inches thick, R-9, with UL flame spread classification of 25 or less, 2" wide continuous vapor tight edge tabs.

1. Vapor Barrier: White vinyl film, bottom side.
2. Vapor Barrier: Foil reinforced kraft paper.
3. Retainer stripes: Provide 26-ga. Formed galvanized steel retainer clips colored to match the insulation facing.

C. Paint and Coating Materials: Unless otherwise indicated, paint and coating materials shall comply with performance requirement of the federal specifications indicated. Unless specifically indicated otherwise, compliance with compositional requirements of the federal specifications indicated is not required.

1. Primers:

- a. Shop primer for Ferrous Metals: Provide fast-curing, lead-free, "universal" primer, as selected by the manufacturer for resistance to normal atmospheric corrosion, compatibility with finish paint systems indicated and capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
- b. Shop primer for Ferrous Metal: Provide fast-curing, lead-free, abrasion-resistance, rust-inhibitive primer as selected by the manufacturer for compatibility with substrates, with types of alkyd finish paint systems indicated and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure. Comply with performance requirements only of FS TT-P-86, Type I, II or III.
- c. Shop Primer for galvanized Metal Surfaces: Provide zinc dust-zinc oxide primer as selected by the manufacturer for compatibility with the substrate. Comply with performance requirements of FS TT-P-25.

2. Finish Coats:

a. **Silicone Polyester Finish:** Provide shop-applied silicone polyester finish to steel roofing and siding panels, and related trim and accessory elements.

1) Finish shall be equal to high performance silicone polyester CERAM-A-STAR 950 utilized by Southern Structures or an approved equal.

2) Primer and finish coat on topside; primer on reverse side.

3) Colors as indicated or as selected by Project Manager from manufacturer's standards.

b. **Shop-Primed Metal Surfaces:** Provided field applied semi-gloss alkyd enamel finish coat as recommended by the manufacturer for use over primed ferrous metal surfaces. Comply with performance requirements of FS TT-E-529, Class A.

2.3 STRUCTURAL FRAMING

A. **Rigid Frames** shall be fabricated from hot-rolled structural steel. Provide built-up "I-beams" shape or open web type rigid frames consisting of either tapered or parallel flanged beams and tapered columns. Provide frames factory welded and shop painted. Furnish frames complete with attachment plates, bearing plates, and splice members. Factory drill frames for bolted field assembly.

1. Provide length of span and spacing of frames indicated. Slight variations in length of span and frame spacing may be acceptable if necessary to meet manufacturer's standards.

2. Provide rigid frame at south endwall as indicated.

B. **End Wall Columns:** Provide factory welding, shop painted endwall columns of not less than 14-ga. Built-up "I" shape or cold-formed sections at north endwall as indicated.

C. **Winding Bracing:** Provide adjustable wind bracing using not less than ½" diameter threaded steel rods; comply with requirements of ASTM A36 or A572, Grade D. Locate interior end bay bracing only where indicated.

D. **Secondary Framing:**

1. Provide not less than 16-ga. Shop painted rolled formed sections for the following secondary framing members:

a. Purlins.

b. Eave Struts.

c. Endwall beams.

d. Flange bracing.

e. Sag bracing.

2. Provide not less than 14-ga. Cold-formed steel sections for the following secondary framing members:
 - a. Base channels.
 - b. Sill angles.
 - c. Endwall structural member (except columns and beams).
 - d. Purlin spacers.
- E. Bolts: Provide shop painted bolts, except when structural framing components are in direct contact with roofing and siding panels. Provide zinc-plated or cadmium-plated bolts when structural framing components are in direct contact with roofing and siding panels.

2.4 ROOFING AND SIDING PANELS

- A. General: Provide roofing and siding sheets formed to the general profile or configuration indicated.
- B. Zinc-Coated Steel Sheets: Provide structural quality hot-dip galvanized steel sheets, complying with requirements of ASTM A463, with T1-40 coating.
- C. Aluminum Coated Steel Sheets: Provide drawings quality aluminum coated steel sheets, complying with requirements of ASTM A463, with T1-40 coating.
- D. Steel Siding Panels: Provide either structural quality hot-dip galvanized steel sheets complying with requirements of ASTM A446, Grade C, with G90 coating or drawing quality aluminum coating steel sheets, complying with the requirements of ASTM A463, with T1-40 coating. Standard SW panel.
 1. Metal thickness not less than 26 ga. (0.0179")
- E. Aluminum Sheets: Provide aluminum sheets fabricated from aluminum alloy 3003 alclad or 3004 alclad with tempering as required to suit forming operations. Comply with requirements of ASTM B209.
 1. Metal thickness not less than 0.032".
 2. Stucco embossed finished.
- F. Roof and Sliding Panels: Provide manufacturer's standard factory-formed panel system designed for mechanical attachment of panels to roof purlins using a concealed clip. Form panels of 24-ga. Galvanized steel sheets complying with requirement of ASTM A 446, Grade C, with G90 coating. Panels shall be equal to Southern Structure's "SR" Roof Pane and "SW" Wall panel, and system shall carry a UL 90 rating.
 1. Clips: Provide not less than 16-ga. Panel chips.
 2. Cleats: Provide factory calked, mechanically seamed cleats formed from 24 ga. galvanized steel complying with ASTM A 446, Grade C with G90 coating.

- G. Fasteners: Provide self tapping screws, bolts, and nuts, self-locking rivets, self-locking bolts, end-welded studs, and other suitable fasteners as standard with the manufacturer designed to withstand design loads.
1. Provide metal-backed neoprene washers under heads of fasteners bearing on weather side of panels.
 2. Use aluminum or stainless steel fasteners for exterior application and galvanized or cadmium plated fasteners for interior applications.
 3. Locate and space fastenings in true vertical and horizontal alignments. Use proper type fastening tools to obtain controlled uniform compression for positive seal without rupture of neoprene washers.
 4. Provide fasteners with heads matching color of roofing or siding sheets by means of plastic caps or factory-applied coating.
- H. Accessories: Provide the following sheet metal accessories factory formed of the same materials and finish as the roofing and siding.
1. Flashing
 2. Closers.
 3. Fillers
 4. Metal expansion joints.
 5. Ridge covers.
 6. Fascias.
- I. Flexible Closure Strips: Provide closed-cell, expanded cellular rubber, self-extinguishing flexible closure strips. Cut or premold closure strips to match corrugation configuration of roofing and siding sheets. Provide closure strips where indicated or necessary to ensure weather-tight construction.
- J. Sealing Tape: Provide pressure sensitive 100 percent solids grey polyisobutylene compound sealing tape with release paper backing. Provide permanently elastic, non-sag, non-toxic, non-staining tape not less than 1/2" wide and 1/8" thick.
- K. Joint Sealant: Provide one-part elastomeric polyurethane, polysulfide, or silicone rubber as recommended by the building manufacturer.

2.5 SHEET METAL ACCESSORIES

- A. General: Provide coated steel sheet metal accessories with coated steel roofing and siding panels.
- B. General: Provide aluminum sheet metal accessories with aluminum roofing and siding panels.

- C. Sectional Ridge Ventilators: Provide factory engineered and fabricated, ridge ventilators of the continuous heat valve type as furnished by the building manufacturer. Provide ventilators in standard 10-foot length sections in locations indicated. Provide unit with 9 inch throat size, complete with side baffles, ventilator assembly, operating damper, hardware, bird screen, end caps, splice plates, flashing, reinforcing diaphragms, closure and fasteners. Finish to match roof panels.

1. Provide bird screens of $\frac{1}{2}$ " x $\frac{1}{2}$ " galvanized steel or expanded diamond mesh.
2. Provide manually operated dampers with chain and worm gear operator.

2.6 OVERHEAD COILING DOORS:

- A. General: Provide complete overhead coiling door assemblies including door curtain, guides, counterbalance, hardware, operators, and installation accessories.
- B. Performance Requirements: Provide doors certified to withstand a 20 psf wind load pressure with maximum deflection of 1/120 of the opening width.
- C. Door Curtain: Provide interlocking steel slat door curtain with one-piece slats for the full length of the door width. Form slats from not less than 20 ga. Galvanized steel sheets complying with requirements of ASTM A446, Grade A with G90 zinc coating complying with ATSM A525.
- D. Door Curtain: Provide interlocking aluminum slat door curtain with one-piece slats for the full length of door width. Form slats from not less than 0.04" thick aluminum 5052 alloy in standard mill finish.
1. Provide heavier metal gages as required for load deflection limitation.
- E. Endlocks: Provide endlocks fabricated from galvanized, malleable iron castings, secured to curtain slats with galvanized rivets.
- F. Windlocks: Provide windlocks fabricated from galvanized, malleable iron castings, secured to curtain slats at 24" on center on both edges with galvanized rivets.
- G. Bottom Bar: Provide bottom bar on door curtain consisting of 2 angles not less than 1/8" thick of the same metal as the slats. Provide flexible rubber, vinyl or neoprene weather seal and cushion bumper on the bottom bar.
- H. Curtain Jamb Guides: Provide curtain jamb guides, built-up using steel angles, channels and flat bars complying with the requirements of ASTM A36. Galvanize after fabrication.
- I. Weather Seals: Provide 1/8" thick continuous rubber or neoprene sheet weather seals on metal pressure bars secured to inside of curtain coil hood. At doorjamb, use 1/8" thick continuous strip secured to exterior side of jamb guide.

- J. Counterbalance: Provide an adjustable steel helical torsion spring counterbalance, mounted around a steel shaft in a spring barrel and connected to door curtain with required barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.
- K. Brackets: Provide cast iron or cold-rolled steel plate mounted brackets with bell-mouth guide groove for curtain.
- L. Hood: Form hood to entirely enclosed the coiled curtain and operating mechanism at opening head, and to act as a weather seal. Contour to suit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Provide closed ends for surface-mounted hoods, and any portion of between-jamb mounted projecting beyond wall face. Provide intermediate support brackets as required to prevent sag.
1. Fabricate steel hoods for doors of not less than 24-ga. Hot-dip galvanized steel sheet with G90 zinc coating, complying with ASTM A525. Phosphate treat before fabrication.
 2. Fabricate aluminum hoods for aluminum doors of Alloy 3003 aluminum sheet not less than 0.032" thick, mill finish.
- M. Shop Finish: Shop clean and prime ferrous metal and galvanized metal surfaces, both exposed and concealed, except for tightly joined and lubricated surfaces, with rust inhibitive primer as standard with the manufacturer.
- N. Manual Door Operators: Provide manual door operators on overhead coiling doors. When type of operation is not indicated, provide chain hoist operator unit.
1. Manual Push-up Operation: Design counterbalance mechanism so that required lift or pull for operation does not exceed 25 lbs. Adjust operating mechanism so that curtain can be easily stopped at any point in its travel and to remain in that position until movement is reactivated. Provide galvanized steel lifting handle and slide bolt lock on inside bottom bar.
 2. Chain Hoist Operation: Provide manual chain hoist operator consisting of an endless cadmium-plated alloy steel hand chain. Chain pockets wheel and guard, and geared reduction unit with maximum 35lbs. Pull for door operation. Design chain hoist with self-locking mechanism allowing curtain to be stopped at any point in its travel and to remain in that position until movement is reactivated. Furnish alloy steel chain with chain holder secured to operator.
 3. Crank Hoist Operation: Provide crank hoist operator consisting crank and crank gear box, steel crank drive shaft and gear reduction unit. Size gear to require no more than 25 lbs. Effort to turn crank. Fabricate gearbox to completely enclose operating mechanism and be oil-tight. Design unit so that curtain may be stopped at any point in its travel and will remain in that position until movement is reactivated. Provide crank locking device. Locate gearbox on inside wall on jamb approximately 36" above floor, unless otherwise indicated.

2.11 FABRICATION

- A. General: Design prefabricated components and necessary field connections required for erection to permit easy assembly and disassembly. Fabricate components in such a manner that once assembled, they may be disassembled, repackaged and reassembled with a minimum amount of labor.

1. Clearly and legibly mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams and instruction manuals.

- B. Structural Framing: Shop fabricate structural framing components to the indicated size and section complete with base plates, bearing plates and other plates required for erection, welded in place. Provide required holes for anchoring or connections either shop drilled or punched to template dimensions.

1. Shop Connections: Provide power riveted, bolted or welded shop connections.
2. Field Connections: Provide bolted field connections.

PART 3 – EXECUTION

3.1 ERECTION

- A. Framing: Erect structural framing true to line, level and plumb, rigid and secure. Level base plates to a true even plane with full bearing to supporting structures, set with double-nutted anchor bolts. Use a non-shrinking grout to obtain uniform bearing and to maintain a level base line elevation. Moist cure grout for not less than 7 days after placement.
- B. Purlins and Girts: Provide rake or gable purlins with tight fitting closure channels and fascias. Locate and space wall girts to suit doors and windows arrangements and heights. Secure purlins and girts to structural framing and hold rigidly to a straight line by sag rods.
- C. Bracing: Provide diagonal rod or angle bracing in both roof and sidewalls as indicated.
1. Movement resisting frames may be used in lieu of sidewall rod bracing, to suit manufacturer's standards.
2. Where diaphragm strength of roof or wall covering is adequate to resist wind forces, rod or other forms of bracing will not be required.
- D. Framing Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical or electrical work. Securely attached to building structural frame.

3.2 ROOFING AND SIDING

- A. General: Arrange and nest sidelap joints so that prevailing winds blow over, not into, lapped joints. Lap ribbed or fluted sheets one full rib corrugation. Apply panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line. Protect factory finishes from damage.
1. Provide weatherseal under rigid cap. Flash and seal roof panels at eave and rake with rubber, neoprene or other closure to exclude weather.
- B. Roof Panel System: Fasten roof panels to purlins with concealed clip in accordance with the manufacturer's instructions.
1. Install chips at each support using self-drilling fasteners.
 2. At end laps of panels install tape caulk between panels.
 3. Install factory-caulked cleats at joints. Machine seam cleats to the panels to provide a weather-tight joint.
- C. Wall Sheets: Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete and elsewhere as necessary for weatherproofing. Handle and apply sealant and back-up in accordance with the sealant manufacturer's recommendations.
1. Align bottoms of wall panels and fasten panels with blind rivets, bolts or self-tapping screws. Fasten flashings, trim around openings, and similar elements with self-tapping screws. Fasten window and door frames with machine screws or bolts. When building height requires two rows of panels at gables ends, align lap of gable panels over wall panels at eave height.
 2. Install screw fasteners with power tool having controlled torque adjusted to compress neoprene washer tightly without damage to washer, screw treads, or panels. Install screws in predrilled holes.
- D. Sheet Metal Accessories: Install ventilators, louvers, and other sheet metal accessories in accordance with manufacturer's recommendations for positive anchorage to building and weathertight mounting. Adjust operating mechanism for precise operation.
- E. Overhead Coiling Doors: Set doors and operating equipment completed with necessary hardware, jamb and head mold stops, anchors, inserts, hangers, and equipment supports in accordance with manufacturer's installation instructions. Adjust moving hardware for proper operation.
- F. Thermal Insulation: Install insulation concurrently with installation of roof panels in accordance with manufacturer's published directions. Install blankets straight and true in one-piece lengths with both sets of tabs sealed to provide a complete vapor barrier. Locate insulation on the underside of roof sheets, extending across the top flange of purlin members and held taut and snug to roofing panels with retainer clips. Install retainer strips at each longitudinal joint, straight and taut, nesting with roof rib to hold insulation in place.

3.3 FIELD PAINTING

- A. Cleaning and Touch-up: Prior to application of touch-up, clean components surfaces of matter that could preclude paint bond.
 - 1. Touch up abrasions, marks, skip or other defects to shop-primed and finished surfaces with same type material.
- B. Protection: Protect work of other trades. Correct painting related damages by cleaning, repairing or replacing, and refinishing, as directed by Project Manager.

END OF SECTION 13120 – See Certification on next page.

PRE-ENGINEERED METAL BUILDING CERTIFICATION

FOR
(Complete Project Name)
(Complete Address)

Contractor

The undersigned hereby certify and guarantee that the pre-engineered metal building supplied on the above captioned project complies with the following:

1. Southern Standard Building Code
2. American Institute of Steel Construction Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.
3. American Iron and Steel Institute Specification for Cold Formed Steel Structural Members.
4. Standards of the Metal Building Manufacturers Association.

The building design loads are as follows:

Roof Live Load	20 PSF
Basic Wind Speed	100 MPH

The building is designed for the following load combinations:

1. Dead load plus live load
2. Dead load plus wind load
3. Dead load plus crane load plus one-half live load
4. Dead load plus crane load plus one-half wind load

Special loads such as hoists, mechanical units, doors, etc. shown on the drawings have been included in the building design.

The roof covering meets United Laboratories Class 90 uplift classification.

Name of Manufacturer

Address of Manufacturer

Certified by:

Name

Title

Louisiana Engineering Registration Number
Louisiana Engineering Seal

Signature

Date

SECTION 15300 – WATER SUPPLY

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Install water supply piping as indicated on site plan.

PART 2 – MATERIALS

2.1 PIPING

- A. Below grade, water supply piping and fittings shall be schedule 40 PVC plastic piping with solvent weld joints. Provide thrust blocks at all change of directions.
- B. Above grade water supply piping and fitting shall be Government Type “L”, hard copper water tubing of standard weight and thickness as made by Mueller, Chase, Anaconda or equivalent, unless indicated otherwise. Use lead free solder on all piping. Braze all piping beneath the slab.

2.2 INSULATION

- A. All domestic water lines penetrating concrete slabs shall be wrapped with “Protect-O-Sleeve” vinyl flexible tube as manufactured by Robert H. Harris, Co., or equivalent.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Water lines run underground shall have a minimum of twenty-four (24) inches cover to finished grade.
- B. Make up complete water supply system. Connect to all fixtures and outlets requiring water.

3.2 TESTING

- A. All lines shall be Hydrostatically tested to 150 psig or two and one-half (2-1/2) time’s normal working pressure.
- B. All water lines shall be disinfected in accordance with the State Plumbing Code. Submit (3) copies of “Certificate of Performance” at completion of project.
- C. Cleaning and Disinfectant: Domestic water line system shall be cleaned and disinfected. The contractor shall furnish all equipment, temporary piping and chemicals, as required. All system piping and equipment shall be thoroughly and completely flushed with cold domestic water. Completely drain the systems and fill with a solution of Sodium or Calcium Hypochlorite, 100 parts per million, completely relieving the system of all air.

Allow the solution to stand for eight (8) hours and then drain and follow with clear water flush for a sufficient period of time to remove all traces of hypochlorite odor. Disinfecting chemicals shall not be introduced into existing piping systems.

END OF SECTION 15050

SECTION 16000 - ELECTRICAL SYSTEMS

PART I - GENERAL

1.1 DESCRIPTION

- A. Work included: Provide all electrical work shown on the Drawings, as specified herein and as needed for a complete and proper installation including, but not necessarily limited to:
- 1) Service entrance equipment.
 - 2) Feeder system, to branch circuit panels.
 - 3) Branch circuit panels for power and lighting.
 - 4) Branch circuit wiring, for lighting, receptacles, junction boxes and motors. including switches, receptacles and all other devices.
 - 5) Lighting fixtures and lamps.
 - 6) Exhaust fans and space heaters.
 - 7) Hangers, anchors, sleeves, supports for fixtures and other electrical materials and equipment.
 - 8) Wiring system, for equipment and controls provided under other Sections of these specifications including, but not necessarily limited to Space Heaters
- B. Interpretation of Drawings: Electrical contractors shall make all minor changes in electrical systems required to meet code at no additional cost to the Owner. Any errors or inconsistencies in the Plans or Specifications which create a question for the electrical contractor shall be brought to the attention of the Project Manager prior to the contract signing.
- C. Fixtures and equipment furnished by others: Provide all rough-ins, fittings and final connections to fixtures and equipment furnished and installed by others, but requiring connection to electrical systems. Determine rough-in locations from the equipment itself or from the equipment manufacturer's shop drawings.

1.2 QUALITY ASSURANCE

- A. Standards. Comply with the specified standards.
- B. Qualifications of installers: Use sufficient journey-man electricians and competent supervisors in execution of this portion of the Work to ensure proper and adequate installation throughout. In the acceptance or rejection of installed work, no allowance will be made for lack of skill on the part of workmen.
- C. Codes and regulations In addition to complying with the specified requirements, comply with pertinent regulations and codes of governmental agencies having jurisdiction including the National Electrical Code, latest edition, requirements of the National Fire Protection Association, latest editions, and local utility company regulations. In the event of conflict between or among specified requirements and

pertinent regulations and codes, bring the conflict to the attention of the Project Manager. The more stringent requirement shall govern. Without additional cost to the Owner, provide such other labor and materials as are required to complete the work of this Section in accordance with the requirements of governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in these Contract Documents

1.3 SUBMITTALS

- A. Product data: Provide submittals containing the following information:
- 1) Complete materials list of all items proposed to be furnished and installed under this Section.
 - 2) Manufacturer's specifications, catalog cuts and other data required to demonstrate compliance with the specified requirements.
- B. Record drawings: During the progress of the work, maintain an accurate record of the electrical installation. Submit to the Project Manager one set of blue-line prints of the electrical drawings showing all information required. In most cases on the Drawings, arrangement of electrical equipment and devised and other similar items, is shown schematically and is not intended to portray precise physical layout. Final physical arrangement is as determined by the Contractor subject to the Project Manager's approval. However, design of future modifications of the facility may require accurate information as to the final physical arrangement of items which are shown only schematically on the Drawings. Show on the Record Drawings, by dimension accurate to within 6", the centerline of each utility, outlet or equipment. Clearly identify the item by accurate note. Show the vertical location of the item measured from finish floor or finish grade. Make all identification sufficiently descriptive that it may be related reliably to the Specifications.
- C. Manual: Upon completion of this portion of the Work, and as a condition of its acceptance, compile and submit to the Project Manager two (2) copies of an operation and maintenance manual. Include all copies of "Circuit Directories" and all warranties and guarantees.

1.4 PRODUCT HANDLING

- A. Protection. Use all means necessary to protect the materials of this Section before, during and after installation and to protect the work and materials of all other Trades.
- B. Replacements. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Project Manager and at no additional cost to the Owner.

PART 2-PRODUCT

2.1 GENERAL

- A. Provide only materials that are new, and of the type and quality specified. Where Underwriters' Laboratories, Inc. has established standards for such materials provide only materials bearing the UL label.

2.2 SERVICE ENTRANCE EQUIPMENT

- A. Trenching, conduit, and metering equipment: Provide secondary service conduit and related trenching, metering equipment and all associated conduit and wiring for metering, all as shown on the Drawings or required by the local utility company.
- B. Main Switch: If required on the Drawings or by the local utility company, provide quick-make, fused type, main switch, rated at 1200 volts and designed for use with current limiting fuses in sizes required by the local utility company.

2.3 DISTRIBUTION SYSTEM

- A. Panelboards: Shall comply with NFPA 70 and NEC codes as well as all federal, state and local laws.
- B. Circuit breakers: Shall comply with National Electric Code.
- C. Ground fault breakers: Where circuits are required to be ground fault protected, provide circuit breakers with ground fault interrupter. All ground fault protection required by code is to be provided in the base contract even if not specifically shown on the Drawings.
- D. Above grade raceways: Conform to Articles 342 through 346 NEC for raceway types for specific applications. Provide electrical metallic tubing (EMT) for all raceways for lighting and small power circuits where not exposed or subject to physical damage. Provide rigid steel conduit for large power and feeder circuits, and where exposed or subject to physical damage. Above grade raceway materials shall be as follows:
 - 1. Rigid galvanized steel conduit: Standard weight, hot-dipped galvanized inside and out, rigid, mild steel conduit, manufactured to meet ANSI C30. and FS WWC-581 specifications. Provide 1/2" minimum size.
 - 2. Electrical: metallic tubing (EMT): Mild steel, electrically welded, galvanized, and manufactured to meet ANSI C80.3 and FS WW-C-563 specifications. Provide in 1/2" minimum size.
 - 3. Fittings: Provide threaded type fittings for rigid conduit. Provide set screw or threadless, compression rain-tight type fittings for EMT conduit. Provide

all required and approved bushings, lockouts, expansion joint fittings, conduit entrance seals, hangers, fasteners etc. as required.

4. Flexible metal conduits: Provide steel or aluminum flexible conduit by Greenfield, or Sealtite, or equal. Provide in 1/2" minimum size, and in six foot maximum lengths. Provide fittings approved for grounding purposes at all terminations.

- E. Below grade raceways: For all conduit installed in earth or concrete slabs, provide UL listed, Schedule 40 - Heavy Wall, rigid, non-metallic, PVC conduit. Provide PVC fittings suitable for solvent welding to the conduit.

- F. Outlet and switch boxes Where nonmetallic-sheathed cable is permitted by Code, outlet, junction and switch boxes shall be non-metallic, fiberglass boxes in sizes required and shall meet all local codes. Provide all required accessories, including mounting brackets, fixture studs, removable covers or plaster rings.

Where metallic conduit is required, provide standard, single or ganged, code gauge octagonal boxes at least 1-1/2" deep, except where otherwise approved. Provide all required accessories, including mounting brackets, fixture studs, removable covers or plaster rings.

- G. Junction and pull boxes: Where necessary to terminate, tap-off or redirect multiple conduit runs or pull long runs of conductors provide code gauge galvanized steel boxes with full access screw covers mounted with corrosion-resistant machine screws. Provide covers for surface or flush installation as required. Provide box size as required by the National Electrical Code.

- H. Conductors and wire connectors: Where permitted by Code, conductors for branch circuit wiring shall be plastic sheathed, non-metallic cable as required by local codes. No wire shall be smaller than No. 14, 2 wire with ground. Provide No. 1-2 wire with ground or No. 8 or No. 10, 3 wire with ground where required. Wherever nonmetallic sheathed cable is not permitted by Code, provide U.L. labeled 600 volt rated, copper wire and cable as follows:

1. Insulation types
Dry locations:

No. 6 and smaller - Type TW, THW or THHN BX cable

No. 4 and larger - Type THW, THHN or XHHW (90 degrees)

Wet locations (underground raceways, raceways in concrete floor slabs or in direct contact with earth, or raceways subject to moisture or condensation.

No. 10 and smaller - Type THW

No. 8 and larger - Type THW or XHHW (75 degrees)

2. Factory Color Coding: (Use consistently throughout the electrical system installation. Where color coding is not practicable as determined by the Project Manager, provide colored plastic tape applied to conductors in boxes, panels and other enclosures.)

Conductor	120/280-240	270/480
Phase B	Red	Orange
Phase C	Blue	Purple
Neutral	White	Gray
Ground	Green or bare	Green or Blue
Exit lights	Yellow	

- I. Connectors: Provide pressure-type, solderless connectors, unless otherwise noted or specified For No.6 wire and smaller, provide connectors of twist-on type. such as "Scotchlock" Type R or Ideal "Wing Nuts". Pressure indent type connectors are not allowed. For No. 6 wire or larger, provide approved solderless lugs of the two bolt parallel groove type or the compression sleeve type as approved by codes. Wire connectors shall be UL listed for use with copper, 600 v wire at 105' maximum operating temperature.

2.4 WIRING DEVICES

- A. Switches: Provide grounded switches rated at 15 amp, 120 volt AC, residential duty with toggle handle, as manufactured by Slater, or equal. All switch bodies shall be ivory. Provide the following quality:

Single Pole Slater No. 610-V
Double Pole Slater No. 612-V
Three Way Slater No. 613-IV
Four Way Slater No. 614-IV

- B. Receptacles: Provide receptacles rated at 15 amp (20 amp where required), 125 volts AC, residential duty, 2 pole, 3 wire grounding duplex, as manufactured by Slater, or equal. All receptacle bodies shall be Ivory. Provide the following quality:

Duplex Receptacles (20 amp) Slater No. 3300-AG-IV
Duplex Receptacles (15 amp) Slater No. 3232-AG-V
Ground-Fault Receptacles Slater No. SIR-15-F-V

- C. Cover plates: Provide cover plates for all wiring devices, and all junction or pull boxes. For flush devices in finished surfaces. provide commercial grade, ivory colored smooth thermoplastic flush plates. For exposed steel boxes, provide galvanized steel plates of a shape to match the box shape. Provide weatherproof cover plates where required.

2.5 LIGHT FIXTURES AND LAMPS

- A. Light fixtures: Provide light fixtures of the types shown on the Drawing, or equals approved, in advance of the bid date, in accordance with the requirements of this section of these Specifications. All fixtures shall be UL labeled and ETL approved and comply with Article 410 of the N.E.C.
- B. Light fixture accessories: Provide all required plaster frames, recessing boxes etc. and provide all necessary supports, hangers and ceiling clips in accordance with N.E.C Article 410-15 and 16. Coordinate ceiling types with lighting fixture trim types and coordinate special provisions for recessed fixtures in accordance with N.E.C. Article 410 Paragraph N. Coordinate prior to shop drawing submittal.
- C. Lamps. Provide lamps manufactured by Sylvania, Philips or General Electric, and of the types scheduled on the Drawings. Provide incandescent lamps rated at 130 volts. Provide bi-pin, rapid start fluorescent lamps, cool white in color, and energy-saving type.
- D. Ballasts: For fluorescent lamps, provide rapid start, energy-saving type ballasts, high power factor. FT approved. Type 1, Class?, Sound Rated A.

2.6 DISCONNECT SWITCHES

- A. Provide disconnect. (safety) switches where shown on the Drawings, or Motor Control Schedule, or where required by the National Electrical Code. Provide general duty type, UL listed, quick-make, quick-break design, externally operated with provision for padlocking. At interior locations, provide NEMA type I general purpose enclosure. At exterior locations, provide NEMA type 3R, raintight enclosures. Where shown on Drawings to be fused, provide fusible, horsepower rated disconnect switches. Label switches with fuse type, horsepower rating, amperage and maximum voltage.

2.7 FUSES

- A. Where fused switches are required, provide Class KS "Fusetron" FRN or FRS fuses, or Class RK1 "Low Peak" LPN or LPS fuses by the Bussman Company, or equal, properly sized for the load served. For circuits over 600 amps, provide silver-sand type fuses with a minimum interrupting capacity of 200,1000 RPMS amps Provide Bussman Company's Class L, "Hi-Cap KRP-C" with O-ring, or equal. Furnish a set of three spare fuses of all sizes installed.

2.8 MOTOR STARTERS

- A. Provide AC fractional, horsepower type, manual starters for single phase electric motors, 1/4 LIP to I HP, 120 and 230 volt AC, consisting of a manually operated. quick-make, quick-break toggle switch with thermal overload element.

2.9 TEMPERATURE CONTROL V41UNG

- A. Provide all conduit and wiring for temperature controls as shown on the Drawings.

2.12 SMOKE DETECTORS

- A. Install an approved single station smoke dectector powered by elec. Service with battery back-up. Locate the smoke dectector in living area so that when activated, the detector shall initiate an audible alarm. Locate additional detectors in each sleeping room.

2.13 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the, Contractor subject to the approval of the Project Manager.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions under which the work of this Section will be performed Correct conditions detrimental to the timely and proper completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordination of work: Coordinate as necessary with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this other trades to prevent unnecessary delays in the total Work Section. Coordinate the installation of electrical items with the schedule for work of
- B. Examination of the Drawings: The Electrical Drawings are diagrammatic, but are required to be followed as closely as actual construction and work of other trades will permit. Promptly bring to the attention of the Project Manager, all discrepancies among the Contract Documents or between the Contract Documents and the actual field conditions.
- C. Resolution of Conflicts: Where lighting fixtures and other electrical items are shown in conflict with locations of structural members and mechanical and other equipment, provide required supports and wiring to clear the encroachment. Where deviations are required to conform with actual construction and the work of other trades, make all such deviations without additional cost to the Owner.

3.3 TRENCHING AND BACKFILLING

- A. Perform all trenching and backfilling associated with the work of this Section in strict accordance with the provisions of these Specifications.

3.4 CUTTING FLOORS, WALLS. OR CEILINGS

- A. Using skilled craftsmen provide all cutting, fitting, patching and repairing required for the installation of the work of this Section. Do not weaken any structural member. Provide sleeves set flush with finished surfaces, for all conduit passing through walls, ceilings or floors. Insulate and caulk as required to waterproof or maintain the specified fire rating.

3.5 ELECTRICAL SERVICE AND EQUIPMENT

- A. Install the electrical service entrance and associated equipment of size and electrical characteristics as shown on the drawings, or required. Field verify existing conditions and locations of utility service. Coordinate all work with the serving utility, and perform all work in accordance with the requirements, standards, and specifications of the serving utility.

3.6 INSTALLATION OF PANELS

- A. General: Unless otherwise shown on the Drawings, install panels with the top of the trim 6-3" above the finished floor. Install an adequate drip shield, when panels are installed under water or waste piping. Locate and install panels to be readily accessible by providing a 3 foot clear space in front of the panels in accordance with the N.E.C.
- B. Labeling : Mount a directory on the inside of each panel door, and on the directory, show the circuit number and complete description of all electrical equipment on each circuit.

3.7 INSTALLATION OF RACEWAYS AND FITTINGS

- A. General: Wherever nonmetallic-sheathed cable is not permitted by Code, install BX cable or a complete raceway system to interconnect electrical equipment. Raceway system runs shown on the Drawings are diagrammatic Determine exact locations in the field.
- B. Concealed conduits: Conceal all raceway systems in walls, above ceilings, below floors, or in furred-out spaces, except in unfinished areas where indicated to be exposed on the Drawings. Provide the specified rigid galvanized steel conduit, or electrical-metallic tubing at the Contractor's option.

- C. Exposed conduit: Where conduit is exposed, run parallel to or at right angle with line of the building. Make bends with standard conduit elbows or conduit bent to not less than the same radius. Make bends free from dents and flattening. Provide the specified rigid galvanized steel conduit for all exposed conduit.
- D. Conduit in earth: Provide the specified rigid non-metallic polyvinyl chloride conduit for all conduit installed in the earth below floor slabs or elsewhere in earth. Extend PVC conduit to the first junction or outlet box above grade, where concealed in a wall. From there on, use metallic conduit. For exposed installations, connect the PVC conduit to a rigid metal conduit elbow below finished floor line.
- E. Conduit embedded in concrete: Provide the specified rigid nonmetallic polyvinyl chloride or rigid metal conduit at the Contractor's option.
- F. Flexible conduit: Provide the specified flexible conduit for all motor connections and at other points of vibration. Provide it in lengths not to exceed 24 inches.
- G. Size: Where not noted, install 1/2" minimum size conduit. Install other sizes noted on the Drawings, or as required by the National Electrical Code for number and size of conductors installed. Size flexible metal conduit as per N.E.C. Article 350.
- H. Bends: Install only the number of bends per run allowed by N.E.C. limitations. Where more bends are necessary, install a pull box. Install concealed conduits in a direct line with long sweep bends and offsets.
- I. Fittings: Install conduits continuous from outlet to outlet and from outlets to cabinets, pull or junction boxes. Secure conduit to all boxes with locknuts and bushings in a rigid manner. Install all such couplings, fittings, etc. required.
- J. Supports: Provide support at 8 feet maximum intervals, at elbows, and at ends of each straight run terminating at a box or cabinet. Support by means of straps, clamps, hangers, or other approved supporting assemblies.-The use of perforated iron strap or wire hangers for supporting conduit will not be permitted. Do not support conduit from other piping systems.
- K. Clearances: Install conduit to avoid proximity to heating ducts and hot water pipes. Where such crossings are unavoidable, install conduit to clear ducts or piping by at least 6 inches or as allowed by code and approved by Project Manager.
- L. Roof penetrations: Where conduit penetrates roof planes, coordinate with roofing contractor or Building Manufacturer and install all such flashings, pitch pockets, etc. as may be required to provide a complete seal to prevent all moisture penetrations.
- M. Plugging and cleaning: Plug or cap all conduit immediately upon installation, to prevent water and debris from entering. Just before conductors are pulled, swab out conduit to remove any moisture or debris.

- N. Environmental air plenums: All wiring, including low voltage and telephone wiring, installed in environmental air plenums or spaces, shall be installed in metal conduit as per the N.E.C.

3.8 INSTALLATION OF LIGHT FIXTURES

- A. General: Install lighting fixtures complete and ready for service in accordance with the Lighting Fixture Schedule shown on the Drawings.
- B. Supports: Install all lighting fixtures so that the weight of the fixture is supported, either directly or indirectly, by a sound and safe structural member of the building, using adequate number and type of fasteners to assure safe installation. Do not support from gypsum board alone. Where mounting frames are required, use only bonderized galvanized or sherardized steel for frames, etc. for protection against rust and corrosion. Screwed fastenings, and toggle bolts through ceiling material or wall paneling, are not acceptable.
- C. Exit and emergency lighting: Install exit lighting and emergency lighting systems as shown on the Drawings or required by codes. Comply with all applicable requirements of the National Board of Fire Underwriters. Where not a battery powered system.

3.9 INSTALLATION OF POWER EQUIPMENT AND CONTROL WIRING

- A. General: Wire to, and connect to, all items of building equipment not specifically described but to which electrical power is required. Coordinate as necessary with other trades and suppliers to verify types, numbers and locations of equipment.
- B. Install conductors in conduit with no other circuits, and install exit lighting system with a separate, fused disconnect switch, connected ahead of the main disconnect switch. Paint box red, label and pad-lock in "ON" position.
- C. Temperature control wiring: Install wiring for all temperature controls shown on the Drawings. Verify requirements type and size of wiring, etc. with the space heater and exhaust fan subcontractor.
- D. Motor starters and safety switches: Install motor starters and safety switches as shown on the Drawings and install all power and control wiring required.

3.10 INSTALLATION OF CONDUCTORS

- A. General: Install all conductors to conform to the applicable requirements of NEC. Install conductors in Nm or BX cable where allowed by Code. Install all other conductors in conduit unless otherwise noted on the Drawings

Exterior, direct burial conductors shall be installed in the specified conduit when placed under any concrete or asphalt pavements. Install conductors to conform to the applicable requirements of NEC Article 300, "Wiring Methods"

Install conductor sizes as noted above, noted on the Drawings, or as required by the NEC.

Install No 10 AWG minimum conductor size from panelboard to first 120 volt lighting fixture; or from panel-board to first receptacle when run exceeds 50 feet. Thereafter increase conductor size as required for a minimum of 3% voltage drop from panelboard to lighting fixtures or receptacles.

Provide pull wires as required and exercise care to prevent damage to conductors or insulation. Pull conductors together where more than one is being installed in a raceway. Where lubrication is required for pulling conductors or cables, use a compound specifically prepared for cable pulling and not containing petroleum or other products which will have a deteriorating effect on the conductor insulation.

B. Branch circuit layout shall be as follows or as required by code:

1. At least two 20 amp circuits shall be provided to serve receptacle outlets in the kitchen and dining areas
2. At least one 20 amp (min) circuit shall be installed for each laundry receptacle;
3. Individual branch circuits shall be provided as required by the N.E.C. for fixed appliances and equipment;
4. Convenience outlets required to be protected by ground fault interrupter circuit breakers or GFI receptacles shall be all outlets in work area, all exterior waterproof outlets, and elsewhere as required by the N.E.C. or shown on the Drawings;

C. Installation of NM conductors shall be as follows:

1. Conceal all conductors; in walls or ceiling space unless otherwise specifically approved by the Project Manager or indicated on the Drawings. Where conductors are allowed to be exposed install parallel with or at right angles to structural members, walls, and lines of the building;
2. Conductors shall be continuous from outlet to outlet. Splices shall occur only in outlet or junction boxes.
3. Keep all conductors at least 6" away from hot water pipes;
4. Where conductors are run through wood joists or studs, holes or openings only large enough for conduit or cable passage shall be drilled through studs or joists at center of member;
5. Secure and support all conductors and conduits in place with approved fasteners at the recommended spacing. Position plastic sheathed conductors back from face of all rough framing a minimum of 1" to prevent damage from drywall fasteners;

- D. **Splices:** Run feeder cables continuous from origin to termination without splices. Where taps and splices are necessary and approved, make in approved splice boxes with suitable connectors. Install all conductors continuous from outlet to outlet with splices made only in outlet or junction boxes. Use junction boxes where required. Leave at least 6" of wire at outlet boxes for connecting fixtures and devices
- E. **Connections:** For smaller than No. 6 AWG conductors, use the specified pre-insulated twist-on connectors. Pressure indent type connectors shall not be used. Connectors of the porcelain cup type shall not be used. For larger than No. 6 AWG conductors use the specified mechanical connections or compression sleeve connectors. Install compression type connectors with the appropriate tools to assure a permanent, mechanically secure, high-conductivity joint. Tape joints where required, using rubber friction tape or vinyl plastic tape as manufactured by Minnesota Mining & Manufacturing Company, or equal.

3.11 INSTALLATION OF BOXES AND WIRING DEVICES

- A. **Outlet boxes:** Install boxes where shown on the Drawings or where required. Install extension rings where required. Install plumb and flush with finished surfaces. Enclose and gasket boxes installed in wet or damp areas, and use corrosion resistant fasteners.
- B. **Knockouts:** Remove only knockouts as required and plug unused openings. Use threaded plugs for cast metal boxes and snap-in metal covers for sheet metal boxes.
- C. **Securing:** Boxes shall be secured with toggle bolts or expansion anchors and steel bolts to masonry or concrete; and with wood screws or nails to wood. Mounting straps, brackets or bar hangers shall be used as necessary to place boxes between structural studs. Rigidly secure all boxes in place so as to resist displacement by subsequent construction.
- D. **Mounting Position:** Where boxes are installed concealed, the front surface of the box or extension ring shall be not more than 1/4" short of being flush with the finished surface. No box shall be installed so as to be inaccessible in the finished work. Center all outlets with regard to paneling, furring, trim, etc. Where several outlets occur in a room, arrange and mount symmetrically.

Correct improperly located or installed boxes with all damaged finishes repaired or replaced. Receptacles switches, etc., shown on wood trim, casework or other fixtures shall be installed symmetrically and, where necessary, shall be set with the long dimension of the plate horizontal, or ganged in tandem.

- E. **Mounting heights** above finished floor (AFF) to the center of the outlet boxes shall be as follows, unless otherwise shown on the Drawings. Where boxes are located

above counters, equipment. etc., mounting clearances shall be verified in the field. Height may be adjusted to nearest mortar joint in masonry walls.

- Switches +44"
- Wall Receptacles - (typical) +18"
- Wall Receptacles (above work benches - field coordinate) +44"
- Thermostat (typical) +52"

- F. Devices: After pulling of conductors clean any and all debris from outlet boxes, and install devices securely to boxes using the appropriate screws. Install devices plumb and so that device plates will be flush and tight to the finished wall surfaces. Install 3- grounded convenience receptacles in the outlet boxes so that the grounding terminal hole or slot is on the bottom, below the current-carrying slots. At split receptacles. indicated on the Drawings, the top half of the receptacles shall be switch controlled while the bottom half remains energized at all times.
- G. Plates: Install device plates after painting work is completed.

3.12 GROUNDING

- A. General: Except where specifically indicated other-wise, ground all noncurrentcarrying metallic parts of the electrical system, in an approved manner, in accordance with the current edition of the National Electrical Code and all local codes.
- B. Ground connection: Install a ground connection at the main service equipment neutral on the supply side of the first switch or circuit breaker controlling the system and extend the ground by the shortest route to a driven ground rod as per N.E.C. and local code. Provide continuity of the grounding system to the water piping system.
- C. Grounding conductors: Provide copper conductors. bare or with green insulation of the size required by the National Electrical Code or otherwise indicated and install in exposed conduit.
- D. Resistance: The maximum resistance between the service equipment ground and the driven ground rod shall not exceed 5 ohms.
- E. Non-metallic raceways: Install a separate grounding conductor in all PVC conduits and other nonmetallic raceways In accordance with National Electrical Code.
- F. Direct buried wire: Install a separate grounding conductor continuously from the service panel to the individual equipment served by all direct burial wire circuits.

3.13 SMOKE DETECTORS

- A. Wire in battery backup smoke detectors. Interconnect detectors so all within a unit will sound when any one detector is activated as required by UBC 3 10.9. 1.

3.14 TESTING AND INSPECTION

- A. General: Provide personnel and equipment, make required tests, and secure required approvals from the Project Manager and codes enforcing agencies having jurisdiction.
- B. Notification: Notify the Project Manager 24 hours in advance of each of the following stages of construction:
 - 1) Completion of underground or sub-slab electrical work prior to placing backfill or concrete;
 - 2) Completion of all rough-in work, prior to covering;
 - 3) At completion of the work of this Section.
- C. Non-conforming work: When material and/or workmanship is found to not comply with the specified requirements, within 3 days after receipt of notice of such noncompliance, remove the non-complying items from the job site and replace them with items complying with the specified requirements, all at no additional cost to the Owner.
- D. Testing: Test all parts of the electrical system and verify that all items function electrically in the required manner.

3.14 PROJECT COMPLETION

- A. Cleaning: Upon completion of the work of this Section, remove from the building and the site, all rubbish and debris resulting from electrical work. Clean all exposed portions of the electrical installation, removing all traces of soil, labels, grease, oil, and other foreign material. Use only cleaners and methods recommended by the manufacturers of the various items.
- B. Painted surfaces: Refinish damaged areas of factory finished electrical equipment. The refinished surface shall be equivalent in every respect to the original surface including color, texture and smoothness of finish.
- C. Identification: Identify all disconnect switches and starters as to the equipment they serve. Using a stenciling machine that produces 1/2" wide black plastic tape with white letters, label each piece of equipment using the complete name of the equipment as well as its mark or number, such as "Air Handling Unit AH- 1. "
- D. Maintenance manual: Thoroughly indoctrinate the Owner's operation and maintenance personnel the contents of the operations and maintenance.
- E. Record drawings: Submit the record drawings to the Project Manager.

END OF SECTION 16000

NEW WOODSHOP BUILDING

Project No. 06-264-02-02-FB

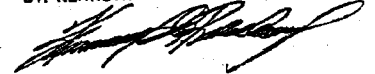
296491

CHICOT STATE PARK

Ville Platte, Louisiana

TABLE OF CONTENTS

REVIEWED FOR
STATE FIRE MARSHAL
AS PER REVIEW LETTER
BY: KENNETH G. ROBICHAUX, ENGINEER



<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1 of 7	TITLE SHEET
2 of 7	SITE PLAN
3 of 7	BUILDING PLAN & ELEVATION
4 of 7	BUILDING SECTIONS & DETAIL
5 of 7	SITE DETAILS
6 of 7	FOUNDATION & PLUMBING PLAN
7 of 7	MECHANICAL PLAN

Prepared By:

Resource Development Section
Office of State Parks
Department of Culture, Recreation and Tourism
June, 2005

LEGEND

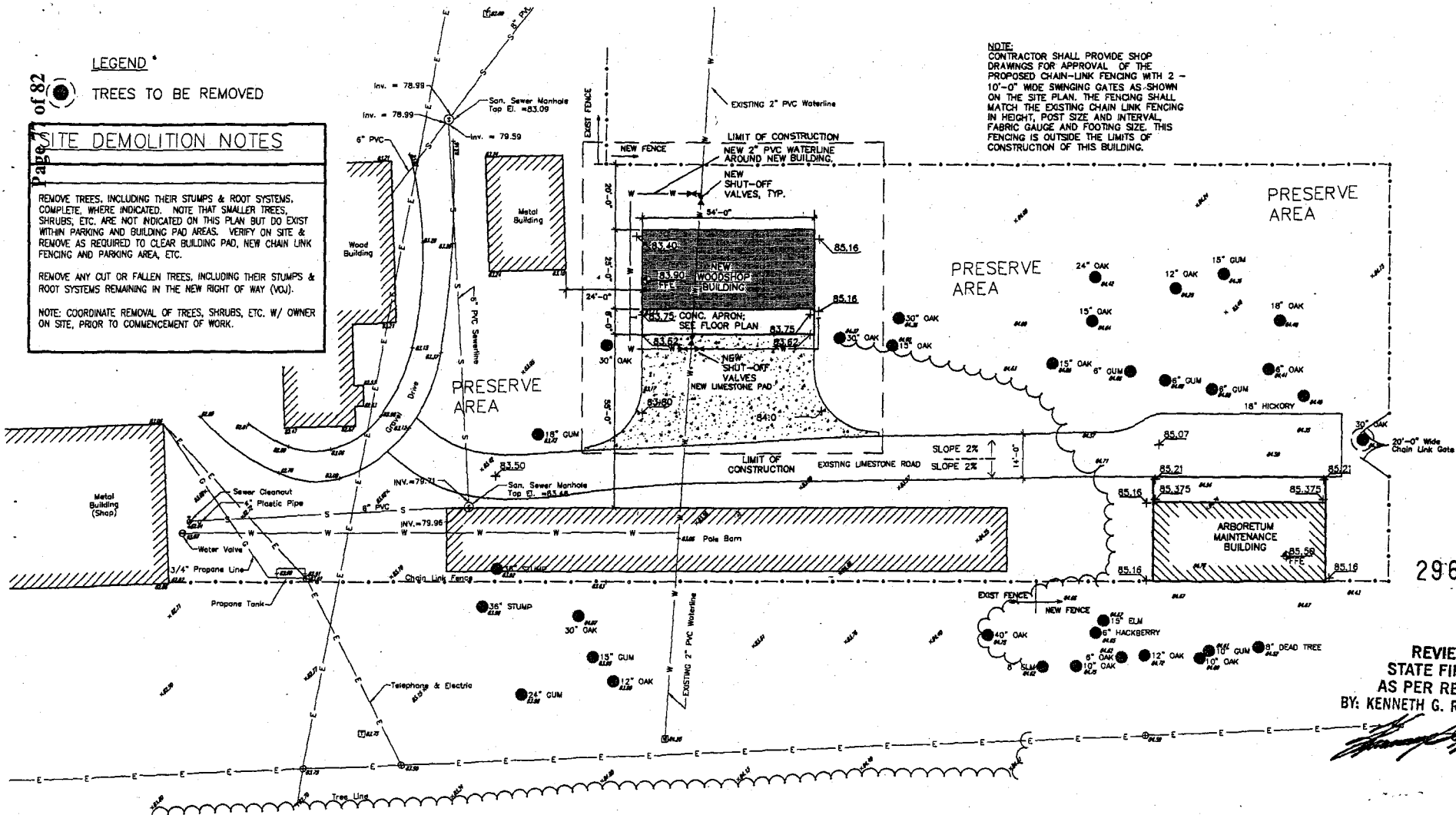
TREES TO BE REMOVED

SITE DEMOLITION NOTES

REMOVE TREES, INCLUDING THEIR STUMPS & ROOT SYSTEMS, COMPLETE, WHERE INDICATED. NOTE THAT SMALLER TREES, SHRUBS, ETC. ARE NOT INDICATED ON THIS PLAN BUT DO EXIST WITHIN PARKING AND BUILDING PAD AREAS. VERIFY ON SITE & REMOVE AS REQUIRED TO CLEAR BUILDING PAD, NEW CHAIN LINK FENCING AND PARKING AREA, ETC.

REMOVE ANY CUT OR FALLEN TREES, INCLUDING THEIR STUMPS & ROOT SYSTEMS REMAINING IN THE NEW RIGHT OF WAY (VOJ).

NOTE: COORDINATE REMOVAL OF TREES, SHRUBS, ETC. W/ OWNER ON SITE, PRIOR TO COMMENCEMENT OF WORK.



NOTE:
CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL OF THE PROPOSED CHAIN-LINK FENCING WITH 2 - 10'-0\"/>

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[Signature]

1 SITE PLAN
1" = 30'-0"



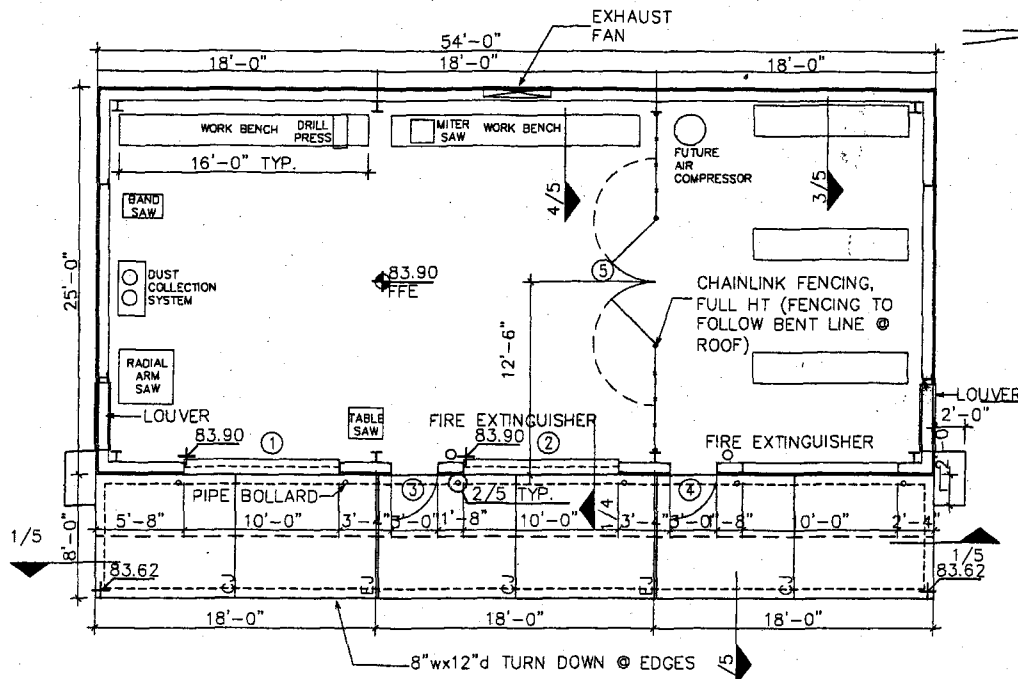
Replacement Woodshop Building
Chicot State Park
Ville Platte, Louisiana

Office of State Parks
Date: June, 2005
Sheet: 2 of 7.

OPENING SCHEDULE

MARK	WIDTH	HEIGHT	THK.	DESCRIPTION	DOOR FINISH	TYPE	FRAME	REMARKS
1	10'-0"	10'-0"	---	MTL. COILING DOOR (MANUAL)	0	M	---	---
2	10'-0"	10'-0"	---	MTL. COILING DOOR (MANUAL)	0	M	---	---
3	3'-0"	7'-0"	1-3/4"	EXT. MTL. FLUSH W/ HALF LITE.	0	H	HM	SAFETY GLASS
4	3'-0"	7'-0"	1-3/4"	EXT. MTL. FLUSH W/ HALF LITE.	0	H	HM	SAFETY GLASS
5	PR 4'-0"	7'-0"	---	CHAINLINK FENCING GATES	---	---	---	PROVIDE CANE BOLT ONE LEAF W/ SLEEVE IN CONCRETE.

0= OPAQUE FINISH

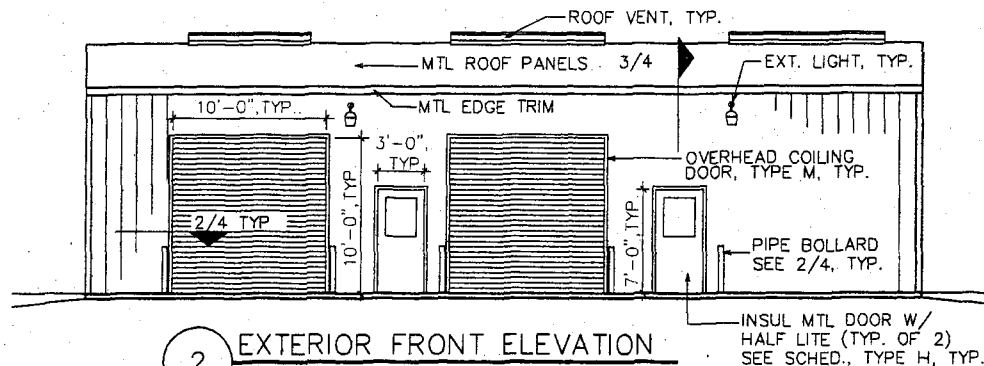


NOTE: CONTRACTOR SHALL PROVIDE AND INSTALL A DUST COLLECTION SYSTEM AS PART OF THIS CONTRACT IN THE LOCATION SHOWN ON THE PLAN. THE SYSTEM SHALL BE INSTALLED PER MANUFACTURE'S RECOMMENDATIONS FOR THE FIVE POWER TOOL LOCATIONS SHOWN ON PLAN. THESE ARE THE TABLE SAW, RADIAL ARM SAW, BAND SAW, DRILL PRESS, AND MITER SAW. THIS SPECIFICATION FOR SYSTEM REQUIREMENTS.

1 WOODSHOP BUILDING PLAN

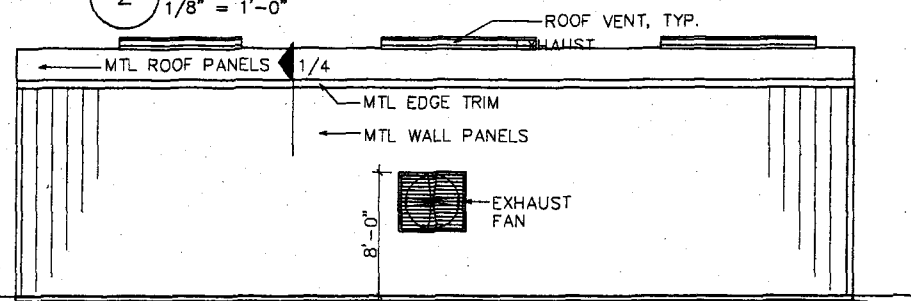
1/8" = 1'-0"

Replacement Wood Shop Building
Chicot State Park
 Ville Platte, Louisiana



2 EXTERIOR FRONT ELEVATION

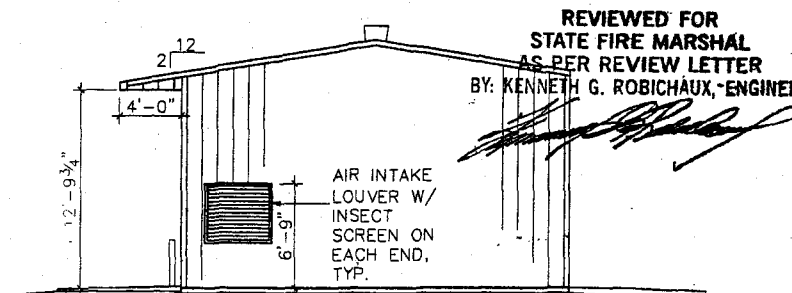
1/8" = 1'-0"



3 EXTERIOR BACK ELEVATION

1/8" = 1'-0"

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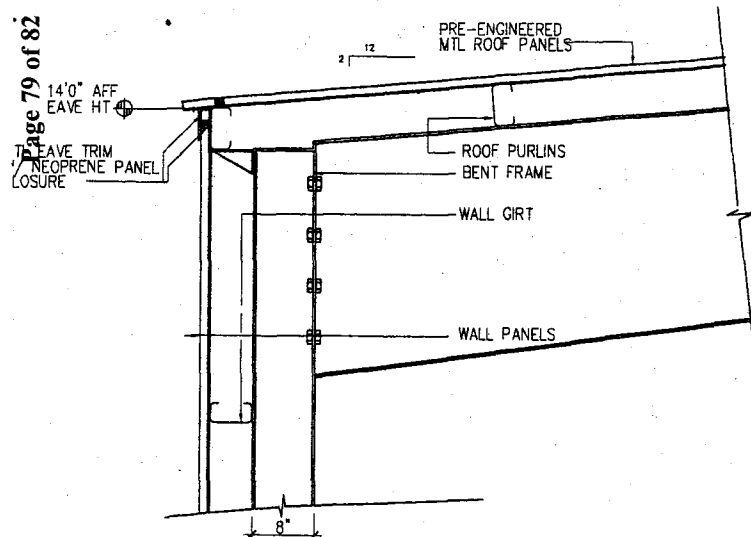


4 EXTERIOR SIDE ELEVATION

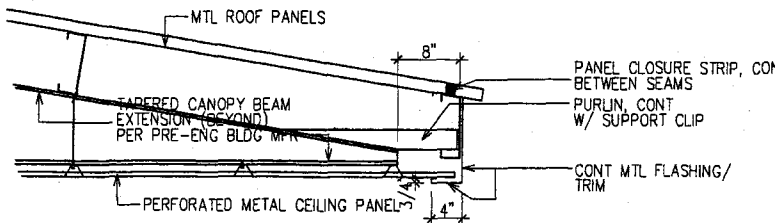
1/8" = 1'-0"

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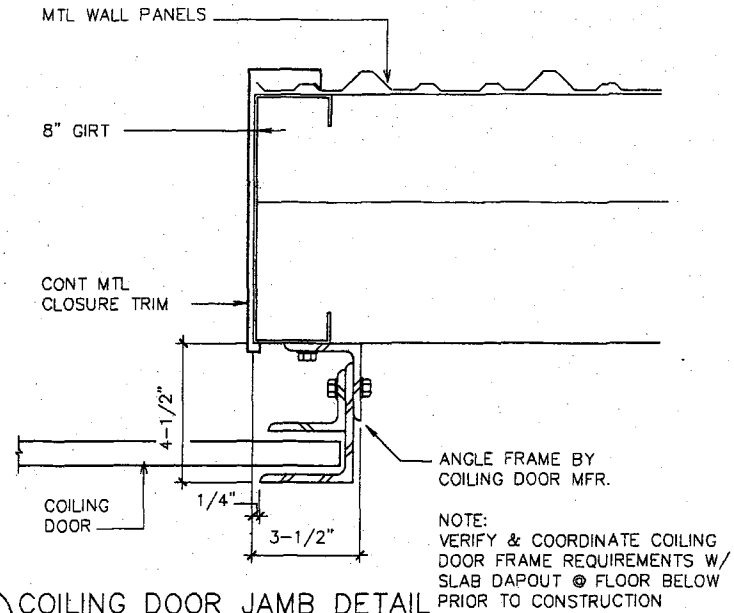
Office of State Parks
 Date: June, 2005
 Sheet: 3 OF 7.



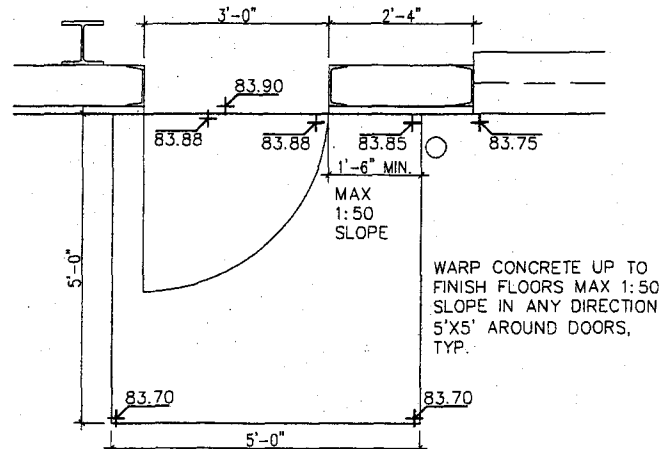
1 EXTERIOR BLDG DETAIL
3/4" = 1'-0"



3 SECTION THRU FRONT CANOPY
3/4" = 1'-0"



2 COILING DOOR JAMB DETAIL
3/4" = 1'-0"



4 DOOR LANDING
N.T.S.

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MIN 6" CONC DRIVE, THICKEN AS INDICATED FOR PERIMETER TURNDOWN

#3 BARS CONT @ 15" OC EACH WAY, TYP

STEEL DOWELS W/ PLASTIC SLEEVE ONE SIDE @ 12" OC, TYP

6" MIN
(2) #5's CONT
COMPACTED FILL

1'-1 1/2" @ CENTER DOOR OPENING

CONT SEALANT
1/2" EXPANSION MAT'L, CONT

BUILDING SLAB
0'0" AFF
REINFORCED CONC SLAB - SEE STRUCT

CONT 6 MIL POLY VAPOR RETARDER EXISTING GRADE

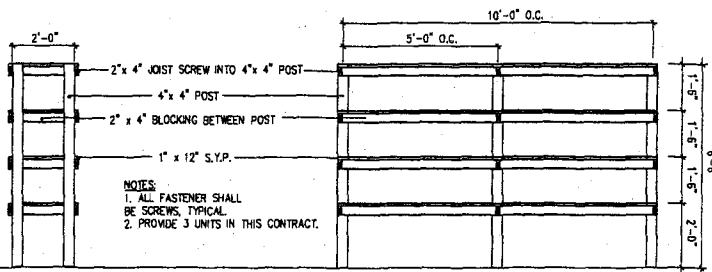
COMPACTED FILL SEE STRUCT

EXIST GRADE

1'0"

1 CONCRETE APRON TO BLDG CONNECTION

1 1/2" = 1'-0"

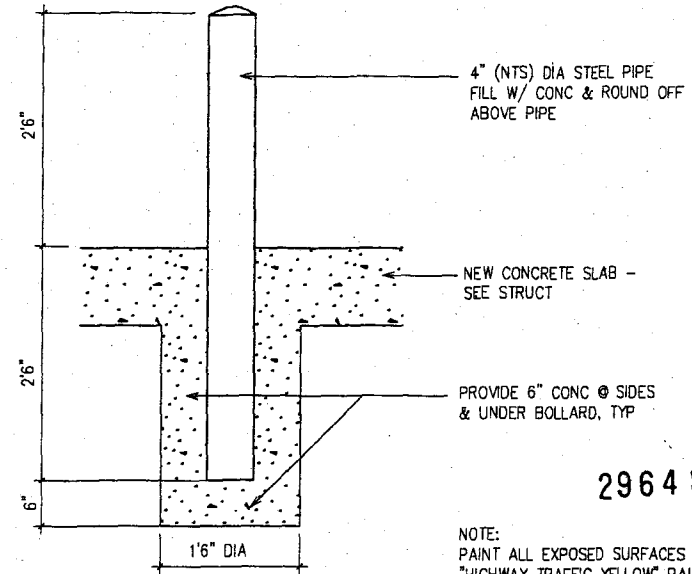


3 SHELVING DETAIL

1/2" = 1'-0"

2 PIPE BOLLARD

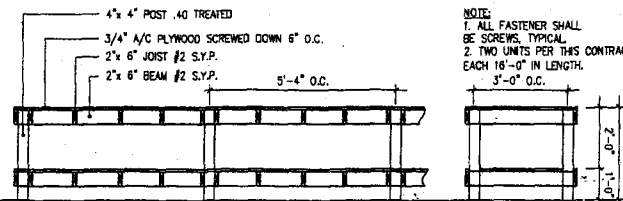
3/4" = 1'-0"



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NOTE:
1. ALL FASTENER SHALL BE SCREWS, TYPICAL.
2. TWO UNITS PER THIS CONTRACT EACH 16'-0" IN LENGTH.
3'-0" O.C.



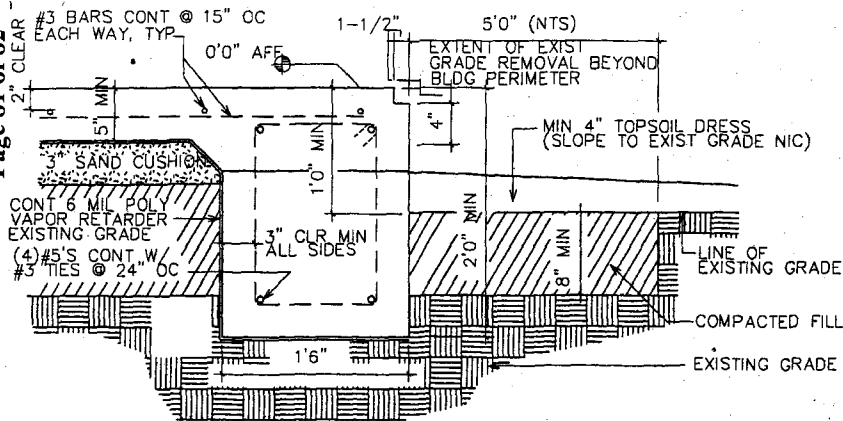
4 WORK BENCH

1/2" = 1'-0"

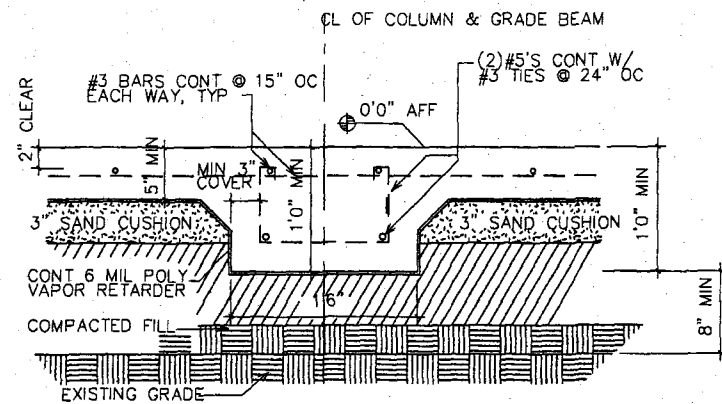
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Sol. #2203309

Replacement Wood Shop Building
Chicot State Park
Ville Platte, Louisiana

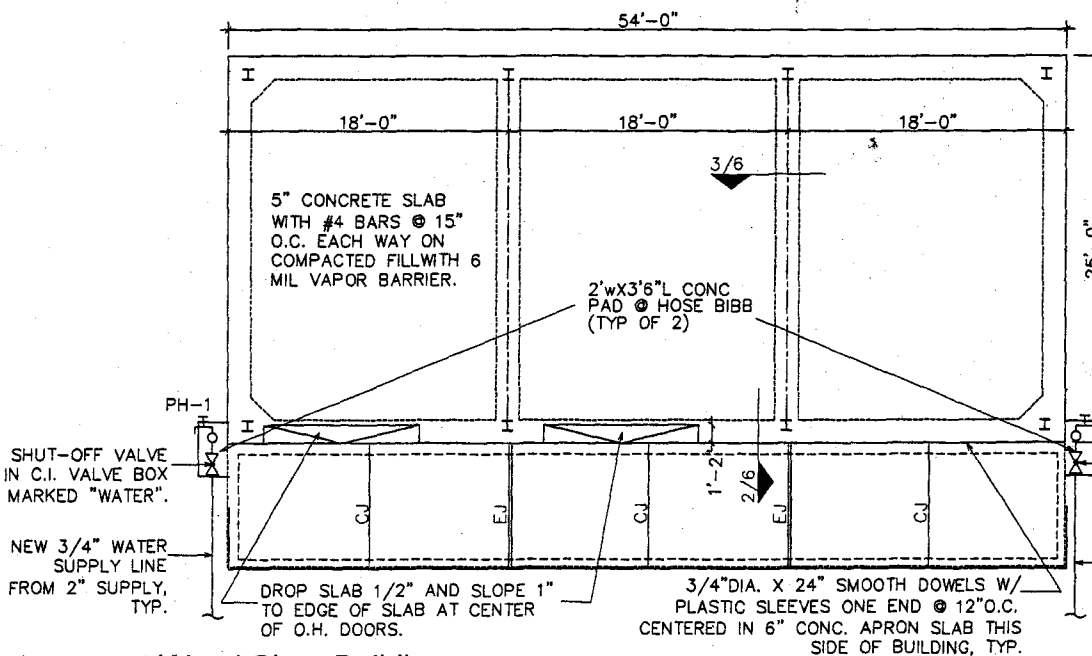
Office of State Parks
Date: June, 2005
Sheet: 5 of 7.



2 TYPICAL PERIMETER GRADE BEAM
1" = 1'-0"



3 INTERIOR GRADE BEAM
1" = 1'-0"



1 FOUNDATION & PLUMBING PLAN
1/8" = 1'-0"

FIXTURE SCHEDULE

NO.	FIXTURE	VENT	REMARKS
PH-1	POST HYDRANT	3/4"	WOODFORD MODEL Y30, J.R. SMITH 5910 FREEZELESS POST HYDRANT 1" GALVANIZED PIPE AND WHEEL HANDLE. PROVIDE 2' X2' X4" CONCRETE PAD AROUND BASE OF HYDRANT.

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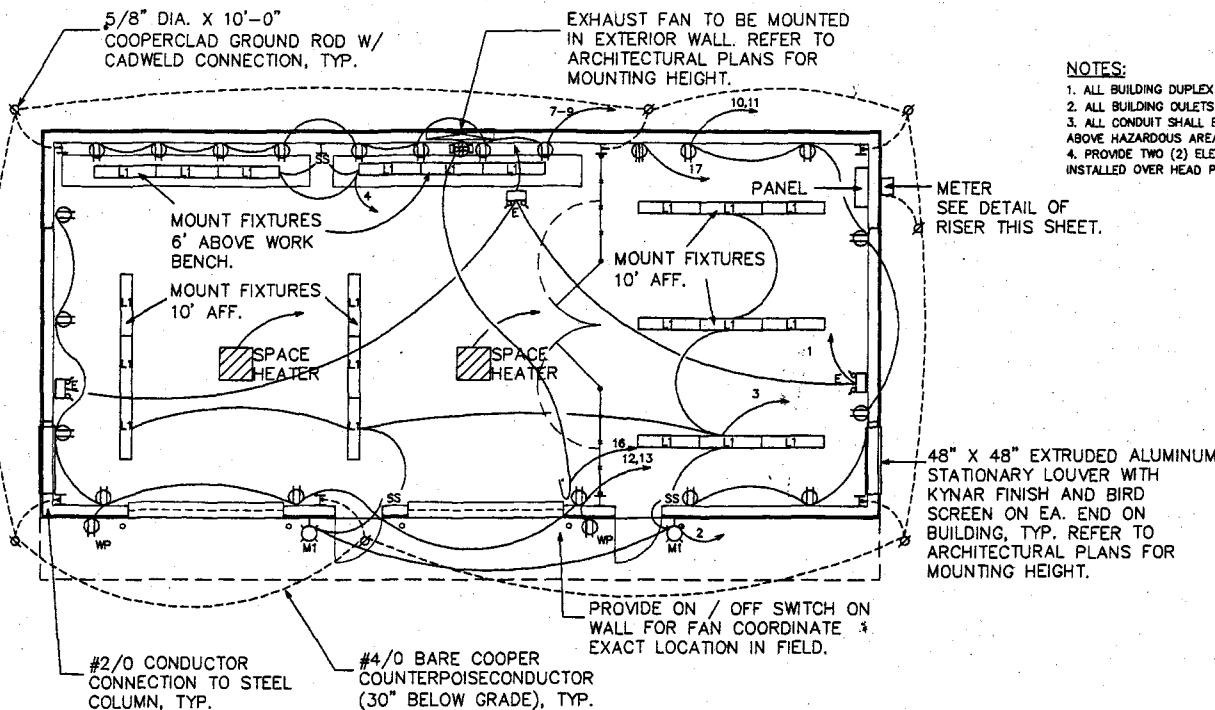
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[Signature]

File # M 26143 DL
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Replacement Wood Shop Building
Chicot State Park
Vill Platte, Louisiana

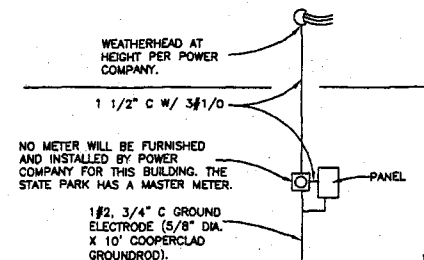
Office of State Parks
Date: June, 2005.
Sheet: 6 of 7.



NOTES:

1. ALL BUILDING DUPLEX CONVENIENCE OUTLETS (INTERIORE AND EXTERIOR) SHALL BE GFI'S.
2. ALL BUILDING OUTLETS SHALL BE MOUNTED 48" ABOVE FINISH FLOOR.
3. ALL CONDUIT SHALL BE RUN OVERHEAD OR 30" ABOVE FINISH FLOOR. ALL ELECTRICAL SHALL BE INSTALLED ABOVE HAZARDOUS AREA. ALL AREAS LESS THAN 18" AFF ARE CLASS 1 DIV 2 PER NEC.
4. PROVIDE TWO (2) ELECTRIC SPACE HEATERS BY DAYTON - MODEL # 3E345A OR EQUAL. HEATER SHALL BE INSTALLED OVER HEAD PER MANUFACTURER'S RECOMMENDATIONS AS SHOWN ON MECHANICAL PLAN.

METER
SEE DETAIL OF
RISER THIS SHEET.



ELECTRICAL RISER
NOT TO SCALE

PANEL

120/240V 1 PH. 3 W. SURFACE MOUNTED TYPE: PANELBOARD				150 AMP MAINS MAIN BREAKER (10,000 AIC)
CKT	POLES	RATING	WIRE	COND. USE
1-4	1	20	12	1/2 LIGHTS
5,6	1	20	12	1/2 SPARE
7-13	1	20	12	1/2 OUTLETS
14,15	1	20	12	1/2 SPARE
16	2	30	10	1/2 DISCONNECT SWITCH (EXHAUST FAN-1 H.P.)
17	2	50	---	---
18-24	1	20	---	---
25-30	1	20	12	1/2 SPARE

LIGHTING FIXTURE SCHEDULE

MARK DESCRIPTION

E LITHONIA #ELM4NAM OR SURE-LITES #CC-7ANC, 2-12W. HALOGEN LAMPS

L1 METALUX #ECIM332120EB81 OR LITHONIA #AFST332120GEB, 3-32W. F32TB/SPX35 LAMPS. SURFACE MOUNT FIXTURE ON GALVANIZED UNISTRUT, SUSPEND UNISTRUT ON STEMS AS NOTED IN THE PLAN.

M1 LITHONIA #TWA100M120PEDMB(*) LPI OR LUMARK #MHGP100H120LLPE(*), 1-100W. METAL HALIDE LAMP, WALL MOUNTED. COLOR AND MOUNTING HEIGHT PER PROJECT MANAGER.

NOTES:

1. FLUORESCENT BALLASTS SHALL BE ELECTRONIC. BALLAST SHALL HAVE A BALLAST FACTOR OF .88 TO .95, THD OF 20% OR LESS(LOW INRUSH), P.F. OF .95 MIN., C.F. OF 1.7 MAX., B.E.F. OF 1.4 MIN. (2-32W. LAMPS), 1.0 MIN. (3-32W. LAMPS) INSTANT START & OPERATE LAMPS IN PARALLEL. SEE SPECIFICATIONS. (SUBMITTAL REQUIRED W/ MFG PART NUMBER ON BALLAST).
2. ALL LIGHT FIXTURES SHALL BE ADEQUATELY SUPPORTED W/ TIE WIRES FROM BUILDING STRUCTURE. NO LIGHT FIXTURE IS TO RELY SOLELY ON THE CEILING FOR SUPPORT. LIGHT FIXTURE TROFFERS SHALL BE SUPPORTED ON ALL CORNERS.

MECHANICAL PLAN

1/8" = 1'-0"

File # M 26143 DL
201009
Replacement Wood Shop Building
Chicot State Park
Site Platte, Louisiana

Office of State Parks
Date: June, 2005
Sheet: 7 of 7.